London River Services
River Infrastructure Guidelines

Transport for London

Contents

Contents (continued)

Introduction

Introduction

“A well designed, confident and consistent visual identity is highly effective in communicating the strengths of our organisation. It is essential that Transport for London (TfL) maintains a high standard for co-ordinated design in every aspect of our operations.”

Nigel Marson - from ‘Standard for TfL products’ product guideline document.

A clear set of standards and a consistent approach to the redevelopment and future development of London’s river passenger pier network is crucial for the success of London’s river services network.

The benefits of a standardised approach to pier design cannot be understated. Standardising procedures, risk assessment, infrastructure products and visual identity promotes confidence in customers creating a viable, enjoyable and practical mode of transport.

What is this manual?

This manual provides guidelines for the future development and refurbishment of London's river passenger pier network.
It outlines the range of furniture, fixtures, fittings and architectural details and standards suitable for equipping and refurbishing both privately owned and TfL managed piers.

This manual outlines the kit of signage elements, infrastructure products and architectural considerations necessary and provides clear direction on:

- Best practice guidelines for architectural, ergonomic and product standards for the future construction and upgrade of London's river pier network.

- Architectural finishes and infrastructure products for consistent LRS brand delivery.

- Directional wayfinding and signage products to facilitate the customer journey from London's travel hubs, stations and stops to river service boarding points.

This document is intended to provide general technical documentation. Specific product references, unless otherwise stated, can be obtianed by contacting LRS.

Who is this manual for and how should it be used?

This manual is intended to be used and referred to by all LRS departments and operating partners responsible for the delivery and upgrade of London's river network of piers and a best practice guideline document for third party owners and operators.

The guideline should be read in it’s entirety, but can also be used as a quick reference for guidance on specific products, architectural finishes and signage elements.

The contents of this manual is arranged broadly into two categories. Firstly, defining architectural standards and features required to operate a safe, efficient and recognisable London river passenger pier, the later chapters of the guideline document focus on standard products, infrastructure elements and signage products.

This document should be used in conjunction with approved technical documentation provided by the architects, contractors and suppliers. Careful considerations should be given to other relevant organisations relating to scheduling, procurement and consultation with local planning authorities.

Architectural standards and common Infrastructure products are identified and described to provide guidance on best practice, placement and availability. Specific technical documentation is available through LRS and its associated contractors and suppliers.

Wayfinding signage has been broken down into its key components on the customer journey, each family of signs has been illustrated to provide quick reference for sign types and general location on pier. Detailed signage information can be accessed in the body of the wayfinding and pier signage chapters. Specific technical documentation is available through LRS.

This manual is also intended to be used as a best practice guide for independent pier owners and operators, offering a clear and consistent approach to pier signage and infrastructure products to ultimately enhance the customer experience and provide a commonality that connects all of London's river piers and offers a platform for a more interconnected network of river services.

For more specific TfL corporate standards please visit the TfL website: tfl.gov.uk/corporatedesign

1 Rules, principles and responsibilities

1 Principles and responsibilities

Contents

1.1 The customer journey

A clear and consistent delivery of pier signage, infrastructure products and wayfinding signage is crucial for the future success of river services. An uncluttered and consistent delivery of on-pier infrastructure products will help to enhance the profile and broaden the appeal of the river services travel.

Wayfinding signage should engage, guide and assist customers to and from key transportation nodes to London's network of river passenger piers and ultimately link the river services network to the broader London transport network.

Architectural detailing and infrastructure products should aid in the customer journey, facilitating a safe journey to and from boarding points with clear and consistent design language projecting an efficient and well run operation.

It is important to understand, the customer journey on the river services network often begins at adjacent
transport nodes. As such, there needs to be clear messaging from stations and stops to pier entrances. Careful consideration must be given to signage elements reinforcing the most efficient route to the pier.

1.2 Responsibilities of delivery partners & operators

There are often multiple partners responsible for the planning and delivery of piers. Each partner will be responsible for ensuring all aspects are delivered to a high standard and meet the requirements outlined in this manual.

Responsibilities include:

Development of infrastructure placement plans and scheme design; stakeholder consultation on wayfinding and signage plans.

Obtain all permissions including branding approval and advertising or planning consents.

Installation and maintenance of infrastructure products, architectural features and signage products.

Removal and disposal of relevant infrastructure products and materials.

The aim of this document is to provide a guide to the implementation of a controlled and consistent language across a broad river piers network. Piers throughout this network can vary enormously and it isn't possible to provide absolute guidance on all possible scenarios, as such, this document is meant to guide and inform the decision making process. The fundamental principles outlined in the document should always be adhered to.

The principle aim in the redevelopment of the rivers network must always be to meet the needs of the customer. We need to make sure that signage, infrastructure products and architectural features conform to the standards outlined in this manual and ensure necessary modifications and retrofits are properly controlled. It should be noted that quality control is vital at all levels of delivery to ensure accurate colour matching and materials selection. Checks must be carried out during manufacture and on delivery of signs, infrastructure elements and architectural retrofits.

1.3 Operator and partner agreement

Notwithstanding any contractual arrangements with planners, suppliers and installers – all details covered in this manual are implicit in the work commissioned by or executed on behalf of LRS

Planning and permissions

Whenever any statutory requirements or planning permissions are necessary, it is the responsibility of the commissioned agency to obtain such permissions to ensure such requirements are met.

1.4 Waste disposal and recycling

The efficient disposal of on pier waste is an important aspect of general pier operations. Consideration must be given to waste disposal and recyclable waste removal procedures.

Waste collected from receptacles must be stored in a discrete location that is accessible for service crews to quickly and safely remove waste from the pier.

If local circumstances allow, waste collection via the river is possible.

On pier sewage pump-out facilities should be considered on new piers where local environmental conditions allow.

1.5 General pier maintenance, cleaning and inspection regimes

For the continuing success of the river passenger piers network we must facilitate the safe movement of customers from entry to boarding point. Regular and efficient cleaning , inspection and maintenance regimes will provide the basis for a safe, well run and successful pier operation.

A clean and efficiently run maintenance program will not only reduce general operating costs and avert major repair works but will also enhance the perceived value of the river service offer.

Cleaning and pier inspections must be carried out on a regular basis by competent contractors. Issues identified must be reported to pier management or engineering staff and dealt with quickly and efficiently.

London River Services

2 Colour standards for the built environment

Transport for London

2 Colour standards for the built environment

Contents

2.1 Colour and material specification principles

Introduction

Colour, and the subtleties of shade are the most effective means at our disposal for distinguishing one object from another. Of the millions of colours available for achieving this differentiation it is important that a palette of only a few is chosen for application to London River Services piers in order that the finished environments are aesthetically pleasant, recognisable and safe.

The use of colour is intended to be judicious and preference should be given to the retention and exposing of natural materials wherever possible.

The environments depicted in this manual are intended as examples only.

In practice each pier to be decorated should be considered in its own right taking into consideration local safety concerns and heritage features, however, certain principles of colour application should remain constant and it is these themes that this guide intends to show.

For instance: Pier brow structures, as standard, will be painted in a dark grey. This provides the ideal backdrop for creating contrast against key aesthetic and functional elements while complimenting the broader 'rivers services' look & feel.
Contrast between vertical and horizontal surfaces and safety aspects such as handrails and rubbing plates will stand out against the darker grey structure.

The darker base structure colour also accommodates the accumulation of ground-level dirt.
In general, colours applied to piers are intended to provide a unifying feature, bringing together the broader river services network. Where necessary colour is also used to provide high visibility to features and products key for customer and operator safety.

Consideration must also be given to existing maritime infrastructure and heritage features. These aspects, inherently associated with the River Thames and its broader context, require a sympathetic approach. The application of colour is to compliment and respect local heritage and maritime features, retaining the use of natural materials where appropriate.

For more guidance on TfL Corporate standards, please visit the TfL website: tfl.gov.uk/corporatedesign

2.2 Colour palettes

Sufficient colour contrast should exist on riverside and operational equipment subject to impact, or furniture and fittings posing a significant obstruction or trip hazard.

In order to satisfy BS:8300 a difference in light reflectance value (LRV) of 30 points shall be achieved between elements required to contrast visually.

All product and exterior paints shall be satin (30% gloss) finish. Colour and paint specifications must be made using the appropriate RAL or NCS colour references displayed on this page.

All paints specified must be fit for use in marine environments. More information on paint specifications and standards, please contact TfL.

R1 - Black

RAL	NCS
9005	NCS S 9000-N

R2 - Dark grey

RAL	NCS
7024	TBC

R3 - Light grey (TfL silver grey)

RAL	NCS
9006	TBC

R4 - TfL Corporate blue

RAL	NCS
5002	NCS S 3560-R80B

R5 - TfL River blue

RAL	NCS
5012	NCS S 2060-B

R6 - TfL Corporate white

RAL	NCS
9016	NCS S 0500-N

Safety Colours

R7 - Safety yellow

RAL	NCS
080 80 90	NCS S 0580-Y10R

R8 - Safety red

RAL	NCS
3020	NCS S 1085-Y90R

R9 - Safety green

RAL	NCS
6001	NCS S 3065-G10Y

2.3 Colour palettes - natural materials

Wherever possible, natural materials should be used rather than painted surfaces.

The following images are intended as examples only.

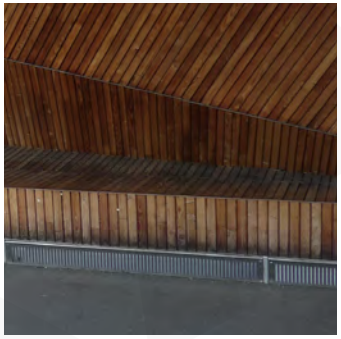
Exceptions to this rule may occur where local heritage features are taken into consideration.

Note: Pier brow handrails will, as standard, be finished in 'Rivers Blue', unless suitable existing natural materials exist, for example: wooden or stainless steel handrails.

Metallic finishes



Natural finishes




Heritage finishes

Natural stone finishes



2.4 Colour & material applications - canopy treatment

Contents

The use of architectural accent colours can help to enhance the visual appeal of the pier and help to define its place within the broader London transport network.

A The use of River blue on canopy nosing and canopy end panels can help to reinforce long distance identification and promote visual recognition.

2.5 Colour & material applications - pier brow

A Accent colours should be used to draw attention to certain objects where safety is a concern, e.g. pier brow handrails finish in ‘River blue’ to provide contrast against the brow structure and surrounding natural surfaces.

B Glass baluster panels.

C Kick panels - Low-level colour contrast of vertical and horizontal surfaces.

Note: All uncovered pier brows must incorporate illuminated hand railing as standard.

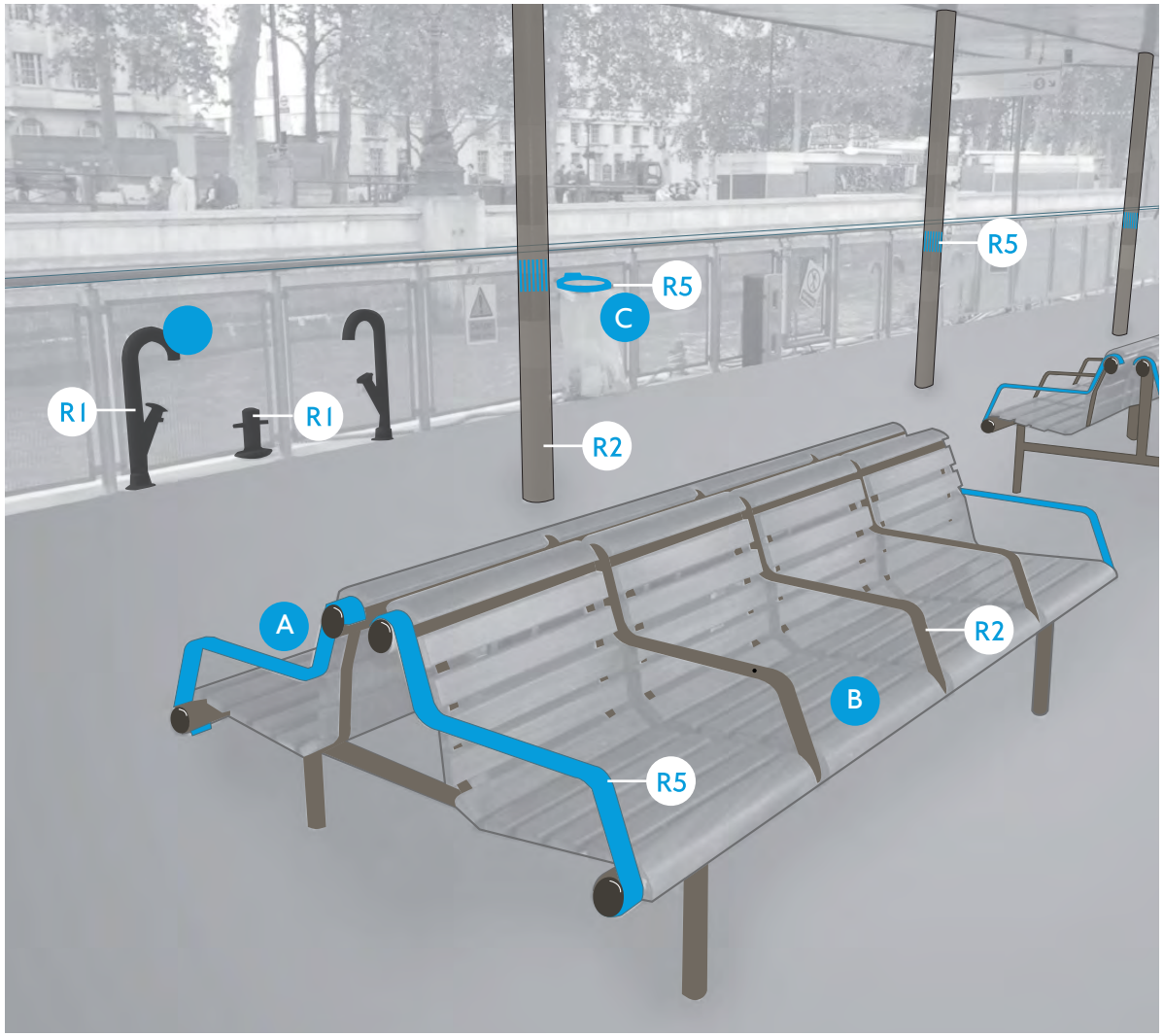
2.6 Colour & material applications - pontoon

A Accent colours should be used to draw attention to certain objects where safety is a concern and where we can enhance the overall 'River' brand experience e.g. Hille seating, the two outside arms are 'River blue' to present a more visible unit for the visually impaired.

B Natural timber slatted seating - Hille Woodrow.

C Blue accents to AVV Bin hoop, the highly visible blue colour, is chosen to
contrast with the surrounding environment.

D Maritime infrastructure elements located on or directly adjacent to the pier should be finished in black unless specific local circumstances prevent application.



2.7 Colour & material applications - columns

Colour contrast on vertical columns shall be achieved through the use of contrasting shades of the same colour.

Where isolated columns pose a safety hazard the use of a contrasting manifestation must be used.

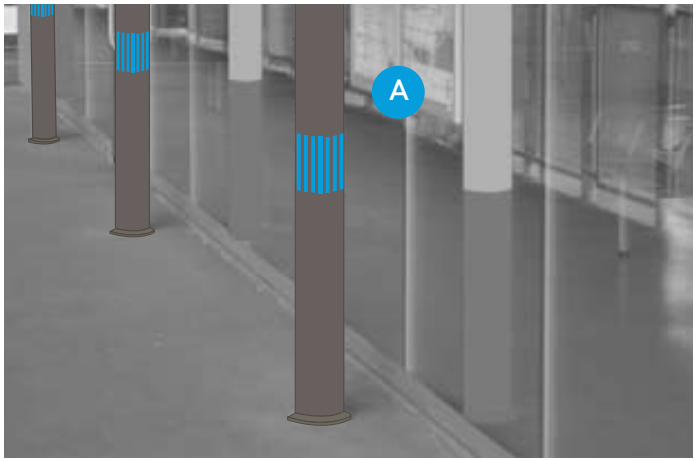
A In instances where vertical columns rise from light ground and where insufficient natural contrast exists between horizontal floor surface and the vertical column, a dark colour should be used (RAL 7024).

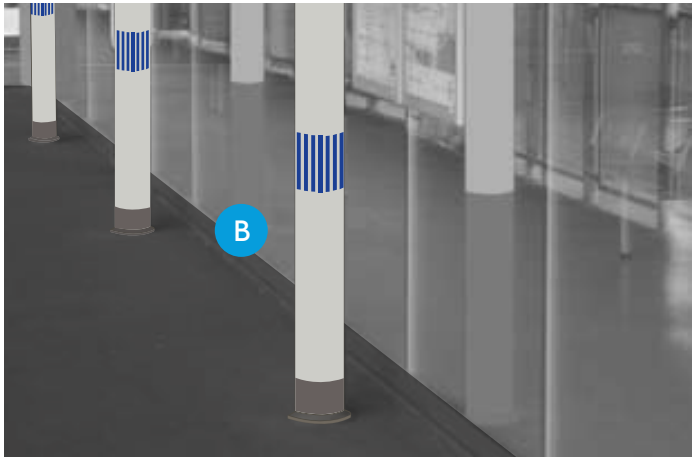
In this case a 'Rivers Blue' (RAL 5012) manifestation will be used.

B In instances where vertical columns rise from dark ground and where insufficient natural contrast exists between horizontal floor surface and the vertical column, a light colour should used (RAL 9006). The application of a darker (RAL 7024) colour band at floor level will prevent the visible build up of dirt.

In this case a 'Corporate Blue' (RAL 5002) manifestation will be used.

NOTE: In order to satisfy BS:8300 a difference in light reflectance value (LRV) of 30 points shall be achieved between elements required to contrast visually.





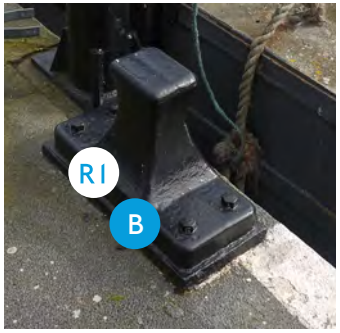
2.8 Colour & material applications - heritage & maritime

Contents

A Natural stone should be left exposed.

B Maritime infrastructure elements located on or directly adjacent to the pier should be finished in black unless specific local circumstances prevent application.

C Heritage features should be retained and finished in a sympathetic manor to match surrounding features.



London River Services

3 Pier architecture - new build guidelines

Transport for London

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3.1 Generic architectural introduction and principles for new build piers

When planning a new passenger pier on the River Thames it is important to carefully consider the operational and functional aspects that facilitate the wide range of London's river boat services.

In addition to principles outlined in the following chapters, there are common basic principles that must be adhered to in all situations, for example:

The walking surfaces of the pier (the bankseat, brows and pontoons) must be sufficiently cambered to minimise the collection of liquids and formation of ice.

Pier surfaces must be specified to provide sufficient slip resistance for the marine environment as described in chapter 4.10

Pier railings and balustrades must adhere to British Standards outlined in chapter 4.2.4.

Pier layout should facilitate the general flow of passengers on and off the pier to minimise congestion and confusion. For guidance on passenger flow refer to chapter 7.

The following chapter describes the key operational considerations for new piers and jetties that intend to serve London's river services.

The guidelines outlined in this chapter adhere to regulations outlined in the Equalities Act.

3.2 Pier location and alignment

Careful considerations needs to be given to the location of new piers to take into account existing local infrastructure and correct alignment with river flows.

All pier location and alignment proposals will require detailed discussion with the Port of London Authority.

More information regarding communication and consultation with the Port of London Authority please visit the PLA website: www.pla.co.uk

3.3 Dredging considerations

It is important to develop and maintain river bed areas directly adjacent to the Pier to enable vessels to dock in a safe and efficient manner.

Dredging of the area under and to the back of the pontoon is necessary to ensure that the pontoon remains afloat at all times and that boats are able to serve the pier. See figure 1.

Piers likely to be served by the larger passenger vessels need to maintain a dredged depth of at least 2 meters. Piers likely to only to be served by the smaller vessels need to maintain a dredged depth of at least 1.5 meters

Grounding and tilting of the pontoon can introduce unforeseen loadings on the brow attachments and must be avoided.

For more information on dredging the River Thames please contact the Port of London Authority via the PLA website: www.pla.co.uk

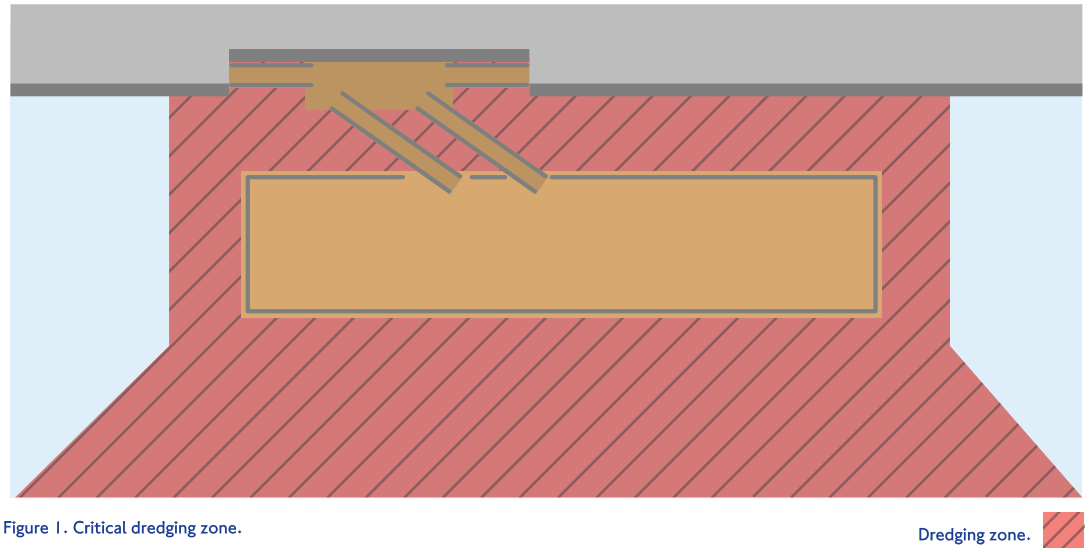


Figure 1. Critical dredging zone.

3.4 Generic pier dimensions

There are no specific standards to determine exact pontoon dimensions on the River Thames, however, the pier's pontoon(s) must be of a size appropriate for its intended purpose. It is important to consider safe operation for passengers and staff, compatibility with local passenger services and impact on the local environment.

The following dimensional guidelines should be observed during the design and planning of all new passenger piers associated with LRS or its operating partners:

Pontoon length

The length of the pontoon must be sufficient to accommodate the services that will call at the pier.

The shortest berthing face on any pier operating passenger services should be 30 metres, the equivalent of one berthing space. For example: A 30 meter berthing face provides a single Class V passenger vessel sufficient operating space to call at that pier. See figure 2.

If only part of a piers berthing face is to be made available as a Class V berth then a space longer than 30m will be required as vessels will not be able to over-hang the length of the pontoon.

Pontoon width

The width of the pier pontoon should not only be sufficient to provide stability but should also accommodate all facilities associated with its intended use.

Provision should be made for passenger queuing, waiting
areas, boarding ramps and mooring activities. Consideration must also be given to access ways for pier maintenance and servicing.

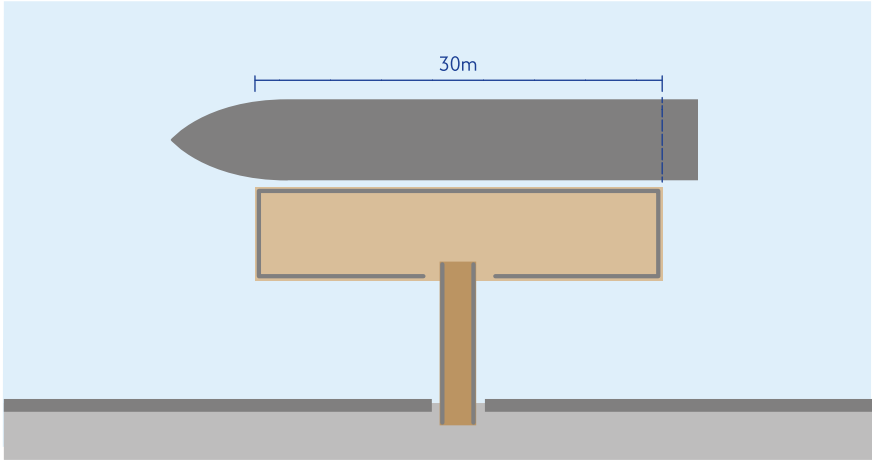


Figure 2. Shortest passenger pier berthing face.

3.5 Operational deck heights

There are great safety advantages to both passengers and boat crews in achieving a consistency of standards across passenger piers. Passenger expectations, staff training and risk assessments are greatly simplified by encountering similar standards at multiple locations.

LRS piers are built to have a pontoon deck freeboard of 1.3 metres. See figure 3.

New piers should be built to a freeboard standard height of 1.3 meters to ensure existing river services are able to serve the new pier.

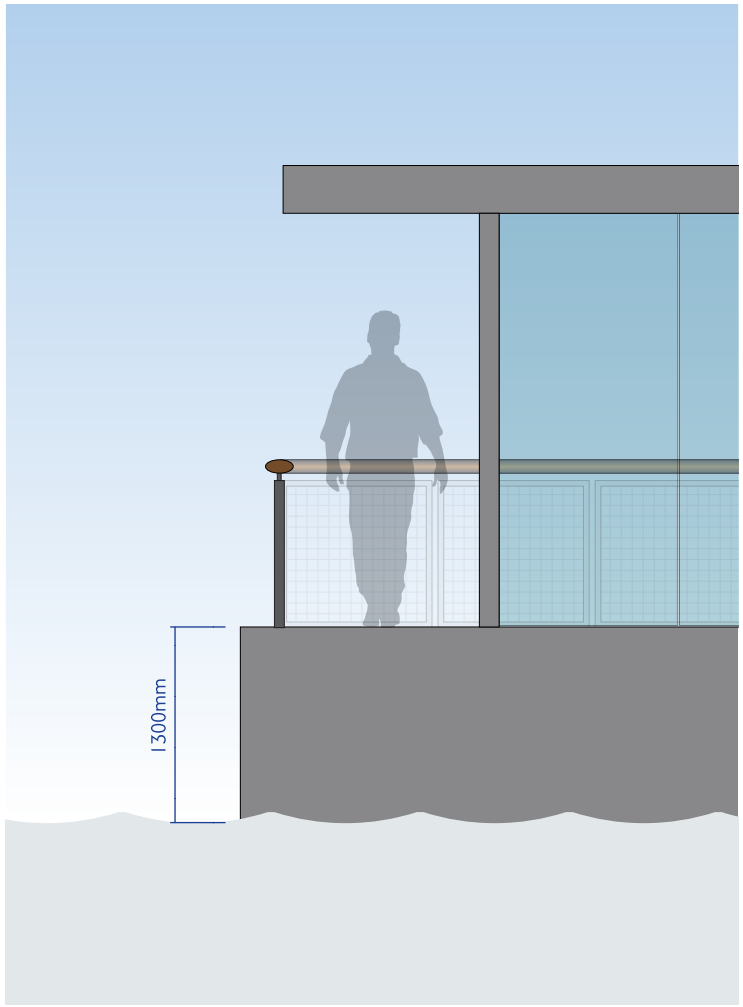


Figure 3. Deck height.

3.6.1 Generic brow gradient standards

Brows are the pedestrian access ramps from the shore or bankseat area to the pier pontoons. Their size will vary depending on pier configuration and location, but when designing the length of a brow due consideration must be given to the potential gradient of the brow at low tide.

Brow width

Pier brow width must provide unhindered and efficient passenger movement, both in accessing river services and in pier evacuation situations. It is important to consider all pier users, including those with mobility impairments. As such, the narrowest point on a new pier brow must be 1.6 metres.

Brow gradients

The gradient of pier brows can change as the tide level changes. The lower the tide, the steeper the brow can become. As the tidal range on the Thames can be as much as 7 metres there is the potential for brows to become very steep and to make access very difficult for passengers with mobility impairments.

Brows at LRS piers have been designed so that their gradient shall not exceed 1/12 at low tide in compliance with the with the Equality Act. This ensures that piers can remain accessible to people with impaired mobility in all but the most extreme states of the tide. See figure 4.

In circumstances where the brow gradient is expected to be greater than 1/12, for example: at sites effected by extreme low tides, then the use of chicane gates should be considered.

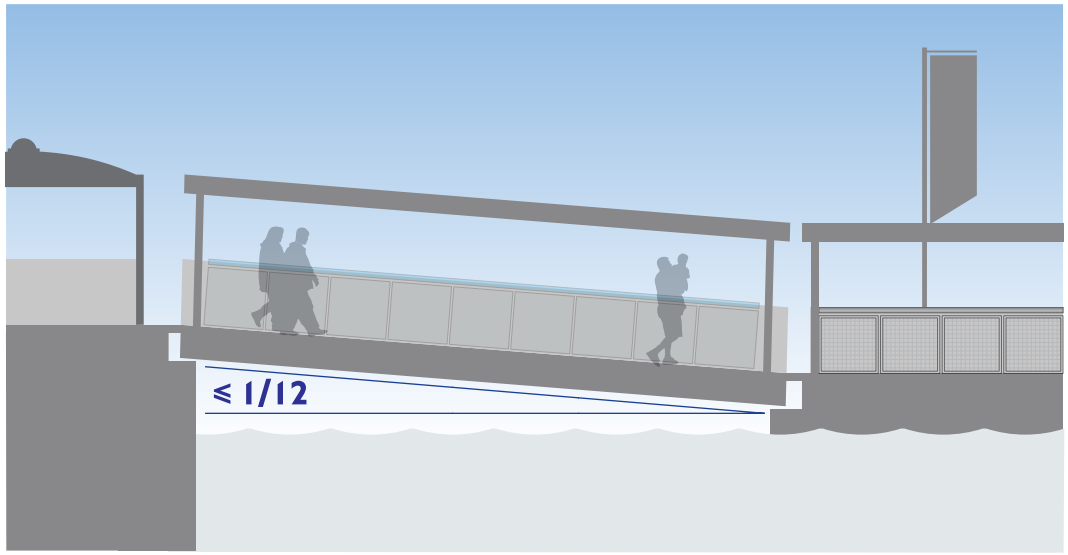


Figure 4. Maximum brow gradient at low tide.

3.6.2 Generic brow gradient standards - Brow arrangement

Brow arrangement

Each pier should be designed to suit its specific location and take into account local river conditions. In certain situations it is not possible to position the pontoons at sufficient distance to achieve a 1/12 gradient, in these situations alternative brow and pontoon arrangements must be deployed.

For example: Westminster Pier (figure 5), where a core pontoon and two sets of brows are used. Blackfriars Pier (figure 6), where the brow runs parallel beside the pontoon rather than behind it.

In situations where it is not possible to achieve a 1/12 maximum gradient the use of a 'Ramp Rider horizontal lift system should be used.

For example: Greenwich Pier (figure 7) Ramp Rider lift was installed due to the maximum gradient exceeding 1/12 at low tide.

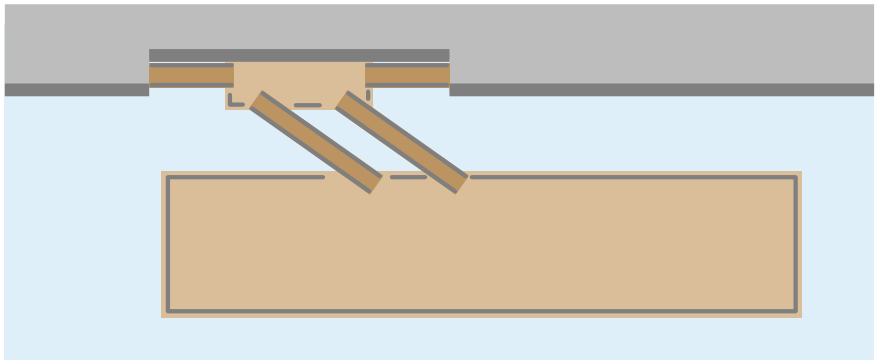


Figure 5. Westminster: Two sets of brows with core pontoon.

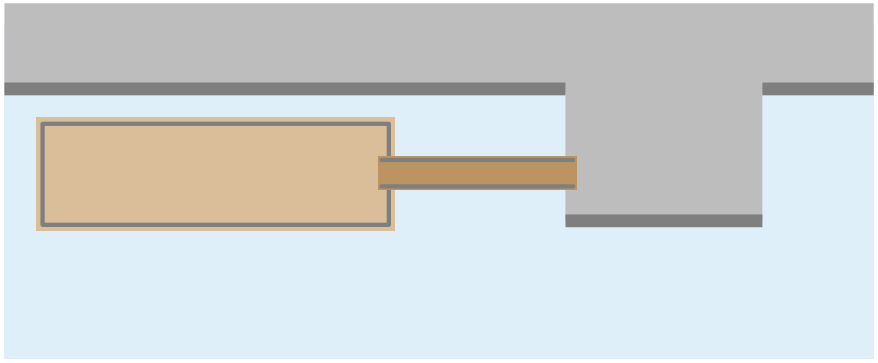


Figure 6. Blackfriars: Parallel Pier brow alignment.

Figure 7. Ramp rider installation for gradients greater than 1/12.

3.7 Pier and jetty fendering standards

Fendering on the berthing face of a pier is critical for the protection of both the pier and the boats that serve it.

Fendering will not only provide protection for vessels serving the pier but will also provide protection to the pier structure itself, particularly during heavy contacts from moving vessels.

A variety of fendering types are used on passenger piers on the Thames, however, the type preferred for use on LRS piers is an ultra high molecular weight polyethylene that is fitted to be no higher that the deck of the pier. See figure 8.

Alternative ‘raised fendering’ systems to better accommodate River Bus services on new piers have been identified. Pier developments intending to be served by River Bus services should contact LRS for more information. See figure 9.

Figure 8. Deck height pier fendering

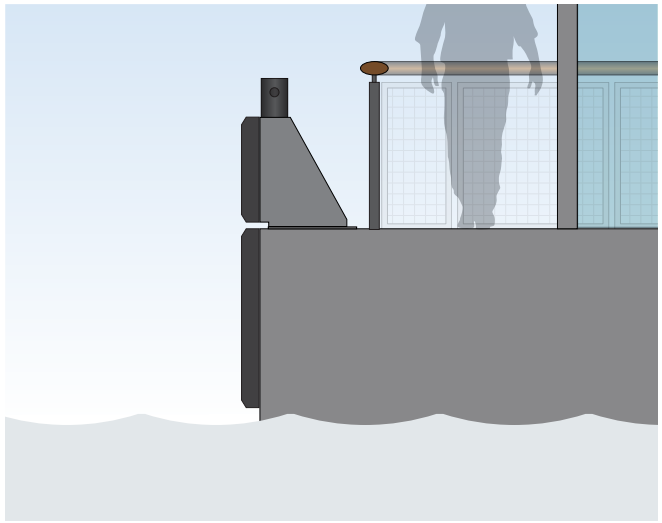


Figure 9. Raised fendering

3.8 Generic standards for the Integration of utilities into piers.

All piers must have an electricity supply for navigational lights and sufficient lighting to ensure safe movement on and around the pier. For navigational lighting arrangement See chapter 4.9.

Electrical supplies and wiring should comply with the 17th edition of the IEE Wiring Regulations. Particular attention should be given to the earthing arrangement of power supply provided to moored vessels. The standard PME (Protective multiple earthing) arrangement must incorporate an isolating transformer.

The range of articulation between structural elements, brows and pontoons makes the use of flexible wiring such as HO7 necessary rather than, say, steel wire armoured cable. For guidance on cable management see chapter 4.7.

A suitable water supply should be considered on all piers for both cleaning and safety purposes.

Consideration must also be given to including on pier pump-out sewage systems, enabling passenger boats to pump out their sewage tanks. A sewage facility can also serve passenger toilet facilities.

4 Pier architecture – general principles

4 Pier architecture - general principles

Contents

4.1 Introduction and principles

Introduction

A standardised approach to the architectural aspects of river passenger piers will help define individual piers as part of a greater network. The functional and visual aspects of the pier will ultimately define its identity and its place within the broader river services network.

It is important to develop a consistent visual language across all of London's passenger piers. This visual identity instils trust and confidence in customers and generally enhances the overall customer experience. From an operational perspective, consistency across piers can greatly reduce servicing and maintenance times and help to facilitate the uptake of upgrades and improvements.

Colour, materials and texture all help to define the piers within the broader network and careful attention should be paid to the application of colour and surface materials.

The following pages describe a series of generic improvements that can be carried out irrespective of specific architectural style. It will offer operational recommendations and insight into best practice methods for product retrofits, how to control various key components, and standardisation of safety products and features.

4.2.1 Pier Brow - Introduction and principles

The pier brow is the first point of entry onto the main pontoon, this walkway is constantly changing gradients as the tide changes, safety must be the priority at this area.

The use of extraneous signage material that can cause blockages or stall passenger movement must be avoided. Features that facilitate the safe movement of passengers while reinforcing the rivers architectural language help to enhance the customer experience and aid in the smooth running of pier operations. For example, safety aspects such as hand rails in rivers blue, provide high visual contrast against the darker coloured support structures and also help to guide passengers onto the pier.

Pier brow structures vary considerably across the river services network, the following examples are intended as a guide only and cannot comprehensively cover all possible scenarios, however, there is a common theme that must be adhered to, where possible the colourways, material selection and general look and feel of the piers should be consistent and follow the principles outlined in this chapter.

4.2.2 Pier Brow - Generic colourways

A **Hand rails:** Accent colour should be used to draw attention to certain objects where safety is a concern, e.g. Pier brow hand rails finished in 'River blue' to provide contrast against the brow structure and surrounding natural surfaces.

B **Baluster panels:** Baluster panels, where appropriate, should be tempered, laminated clear glass. Each brow treatment should be considered in its own right and natural materials and finishes can be used where appropriate, incorporating glass baluster panels whenever possible.

C **Brow structure:** The brow structure should be, where appropriate coloured dark grey to match RAL7024. This darker grey colour provides contrast between key functional elements such as handrails. It also provides a contrast between the naturally lighter aggregate floor finish and dark grey structural elements.

4.2.3 Pier Brow - Surfacing and canopy treatment

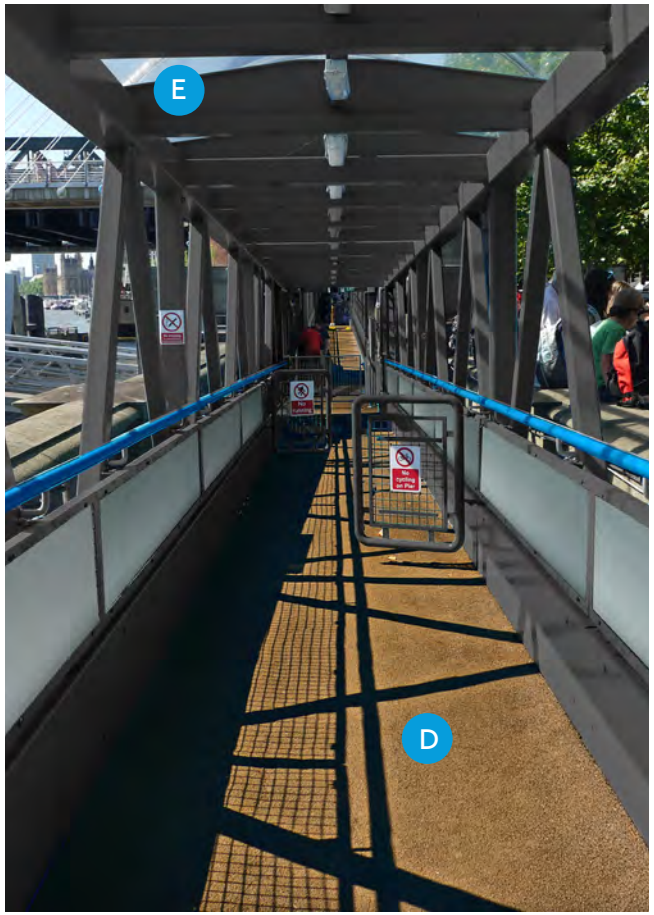
D **Brow floor surface:** Resin Bonded Aggregate - in a natural deep yellow gold shall be used, Providing a good contrast with dark grey structural elements.

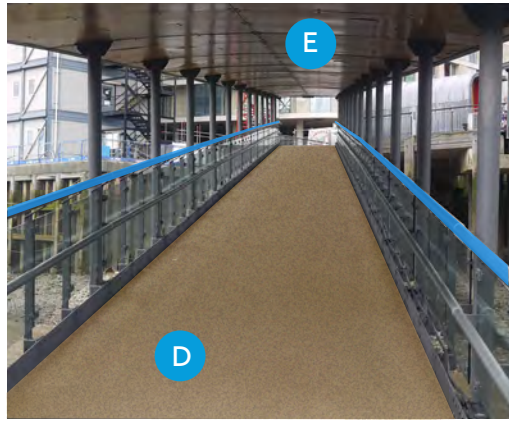
Resin bonded aggregate has excellent slip resistance and can be installed on uneven surfaces with little surface preparation. Installation and subsequent down time is kept to a minimum.

The porus nature of the finished surface may require additional sub surface preparation.

E **Brow canopy:** The brow canopy treatment should be sympathetic to the architectural style of the brow. If natural materials exist it is desirable to retain this, however, where possible ceiling materials that transmit natural light would be preferred.

A covered canopy is not appropriate in all circum-stances and site specific surveys should be carried out on a site by site basis.





4.2.4 Pier Brow - Balustrades and handrails

Balustrades: All new balustrade arrangements shall be designed with vertical support structures to prevent children climbing the structure.

Baluster panels shall be tempered, laminated clear glass panels.

No 'gap' in the balustrade arrangement shall be greater than 90mm in accordance with BS7818:1995, however 110mm is allowed in areas adjacent to moving joints.

The clearance height of the lower baluster panel edge shall be no greater than 150mm.

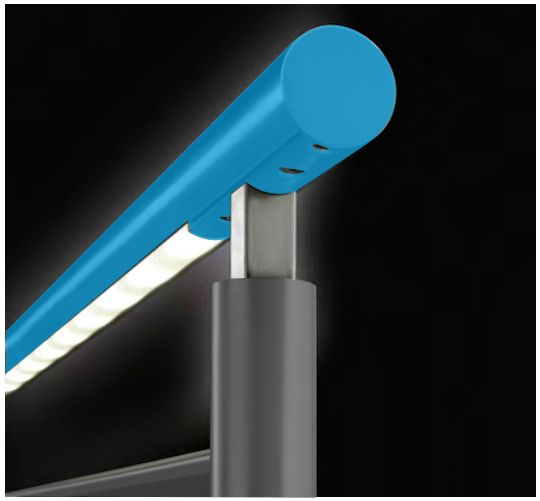
Handrails: Illuminated handrails are the preferred option for all pier brow walkways. Illuminated handrails are designed to provide even distribution of light down the entire length of the brow. Low voltage LED lighting units are extremely low maintenance and have a long usable life span.

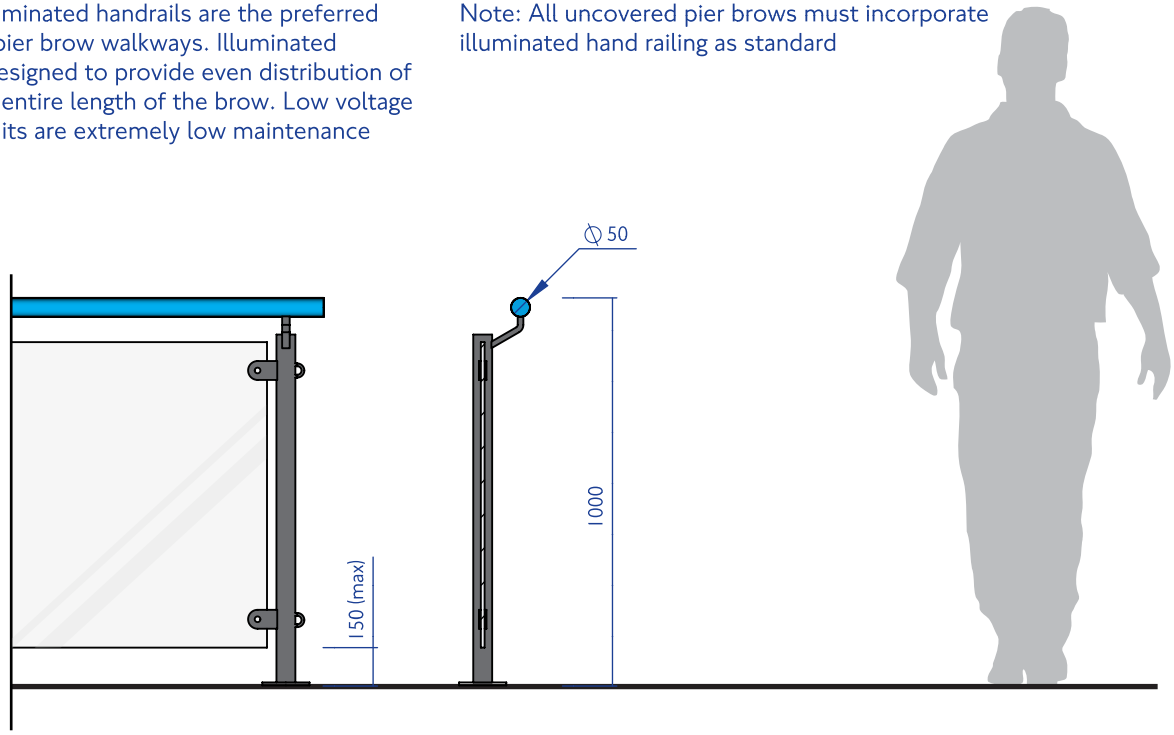
This reduces the need for individual lighting units and associated exposed cabling located along brow balustrades and grates. Beam angles, size and light output to be specified upon site survey and to adhere to piers lighting guideline document.

Handrails should, where appropriate, be set forward of the glass baluster panels to act as a buffer or clear zone from potential impact to the glass surfaces.

All handrails shall be coated in a durable PPA thermoplastic resin to match 'River blue' RAL 5012.

Note: All uncovered pier brows must incorporate illuminated hand railing as standard





Front Elevation Side Elevation

4.3.1 Waiting rooms - Introduction and principles

Introduction

The river Thames presents a unique environment within the London travel network, particularly for its travelling customers, there are many aspects that must be considered when catering for passengers entering and disembarking London's river piers.

A key aspect to the broader rivers offer is a dedicated waiting area. The weather, frequency of service and nature of touristic river travel presents an interesting set of challenges and as always the customer experience should be the focus.

Waiting or dwell times on the pier can vary significantly and sufficient and comfortable waiting areas are an important part of the rivers offer. Where necessary, an allocation for a covered waiting space must be considered at all piers.

Careful consideration should be given to the size, space and dwell time of passengers in order to utilise the space most effectively. The waiting room design and layout should enable customers to move easily through the space and, when necessary cater for periods of high passenger numbers.

River tour services are often high value offers, the river tour experience starts when customers arrive on the pier, as such the passenger experience must be supported by the facilities available on pier.

General principles

If no provision for a waiting room exists or on small and uncovered jetties and landings, Landmark London rivers shelters should be used - See chapter 5.6 for more detail.

Where appropriate, customer seating should face forwards, toward boarding points and in the general direction of approaching water craft.

Woodro, centro and perch seating variations should be used as standard - see chapter 5.4 for more information.

Travel and route information boards, as described in chapter 7.3, should be present. Where appropriate, wall mounted leaflet racks, as described in chapter 5.3, should promote local tourist attractions and broader travel opportunities on the TfL network.

Help points should be within clear visual range of waiting passengers, or where possible, located within the waiting room areas. See chapter 5.7 for more details on help points.

Fire extinguishers should be located in all enclosed waiting areas.

Low maintenance, commercial grade nonslip flooring should be used where possible. See chapter 4.10 for flooring specification details.

Where possible, materials and finishes should be selected for their sound and vibration damping qualities.

When considering enclosed waiting rooms, waiting areas with long dwell times and piers with regular winter services, a provision for heating and air conditioning should be included.

Where possible internal divisions and partitions should be avoided. As a general rule, waiting rooms should not be used for general storage.

Solid walls should be treated with sound damping materials and finishes where possible. Where appropriate, feature walls should remain sympathetic to local heritage and local environmental features. All glazed walls must have TfL corporate manifestations applied. See Chapter 4.11 for details on TfL corporate manifestation.

4.3.2 Waiting Rooms - Large format layout and queuing examples

Contents

Provision should be given to standard format seating.

Seating should face toward boarding points where possible.

A provision for information and leaflets should be made, particularly when passengers are likely tourists with potential to access the broader London wide travel network and associated offers.

Perimeter seating layouts offer flexibility during periods of high and low passenger demand. During 'peak' times with high passenger throughput, Tensator barrier queuing systems can be utilised to regulate the flow of passengers and offer increased capacity. See figure 10.

In 'off peak' times, when passenger demand is reduced and dwell times are longer flexible seating arrangements can provide additional capacity for waiting passengers. See figure 11.

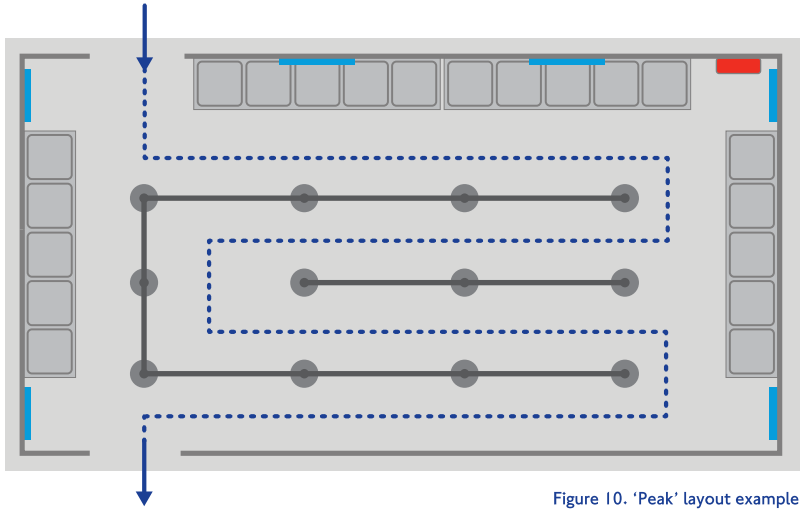


Figure 10. 'Peak' layout example

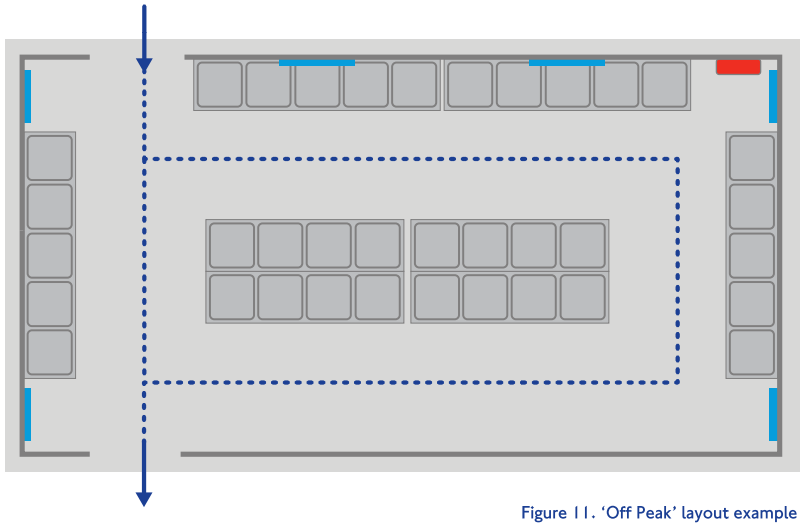


Figure 11. 'Off Peak' layout example

4.3.4 Waiting Rooms - Surfaces

A **Flooring:** Where appropriate flooring surfaces should be low maintenance, commercial-grade nonslip flooring. In accordance with DIN 51130 classification, a minimum slip rating of R9 should be observed in interior applications and R10 + for external waiting areas.

B **Glazing:** All glazed walls should be toughed laminated safety glass. Glazed walls should, as standard, have the TfL manifestation applied. For more information on manifestations see chapter 4.11.

C **Vertical surfaces:** Vertical surfaces should be clad with suitable interior cladding or wall surfacing materials suitable for high use public environment. In accordance with BS EN 14390:2007, It is recommended all interior surfacing materials achieve a minimum flame retardant fire classification of class B.

Solid walls should be treated with sound damping materials and finishes where possible. Where appropriate, feature walls should remain sympathetic to local heritage and local environmental features.

D **Ceilings:** Ceiling treatment should be sympathetic to general architecture and surrounding surface treatments. Internal lighting should be positioned to provide bright and even illumination, where possible, illumination levels of 200 lux, at ground level, are desirable for interior waiting rooms.

4.4 Pier to boat boarding ramps

It is essential that passengers and staff are able to safely embark and disembark vessels at the pier. Passengers must do so in a 'Step-free' manor that is suitable for passengers with reduced mobility.

Boarding ramps and pens must be used on all piers served River Bus services.

There is no standard boarding ramp model for River tours or charter services, however, any ramp design must take into account local environmental conditions, general functionality and the river services the pier intends to receive.

'Ramp and Pen' boarding ramp - Image source 'Islandmarine.co.uk'.

'Ramp and Pen' boarding ramp in use - Image source 'Islandmarine.co.uk'.

4.5 Additional passenger facilities

While not essential, additional passenger facilities on piers can greatly enhance the customer experience, the inclusion of the facilities described below can add value to the broader River offer and help to broaden the appeal of river passenger services.

Toilet facilities: Pier toilet facilities should be considered where possible.

Waiting rooms: An allocation for a covered waiting space must be considered at all piers.

For guidance on design considerations for waiting areas see chapter 4.3.

Retail: Where appropriate, consideration could be given to expanding and introducing retail offers on London's river piers. If carefully controlled, retail offers can enhance the customer experience while providing additional revenue streams through facilities commonly associated with London's broader transportation network. For example, coffee kiosks and newspaper stands are common features throughout London's transport network.

4.6 Pontoon retrofit fixing systems

Contents

Standard TfL approved procedure is recommended during any retrofit of additional structures or free standing products to the hull.

At no point should the pontoon hull or deck plating be punctured.

For guidance on retrofitting systems please contact TfL.

4.7 Cable management systems

Cable management on piers, brows and embankment walls should be considered carefully, loose cables and wiring is unsightly, difficult to maintain and potentially poses a safety risk to passengers and staff. In general, cables should be clean, tidy and arranged to allow ease of maintenance. Cable management should reflect a well maintained and well run facility.

Cable management will need to be assessed on a site by site basis, however the general principles outlined here should be adhered to. All conduit, cabling and trunking should run in a discrete location and out of passenger sight where possible.

Pier brows: All cabling on the exterior structure should be consolidated into a single run of trunking that is hung below the floor line. Trunking should be fixed or hung in a suitable, accessible location out of passenger sight.

Embankment walls: Where loose cables and existing trunking is causing visible distraction or presenting a safety concern, wiring should be consolidated into a single run of conduit suited to the local situation. Where possible the use of existing fixing or mounting points is encouraged, however, if new trunking systems require an alternative fixing method approvals should be sought from local authorities. If the trunking is visible it should be painted in a suitable colour sympathetic to the local environment and in consideration of local heritage features. Refer to chapter 2 for guidance on colour standards for the built environment.

Main pontoon: Cabling on the main pontoon is complex and no single rule can be applied to capture all local scenarios. However, where possible loose and separate cables should be collected and consolidated into a single line of trunking and run in a discrete location. If possible trunking should be run out of sight in ceiling and wall cavities or, where possible, below the pontoon floor level.

Cabling and conduit runs from retrofitted products should ideally be run out of site, if cabling can not be run internally through wall or ceiling cavities, where appropriate, external conduit should be run below pontoon floor level.

NOTE: All trunking must be specified to suit marine environments and be suitable to specific local needs. Certified contractors or LRS engineers should always be consulted. All relocated trunking must be accessible for maintenance purposes.

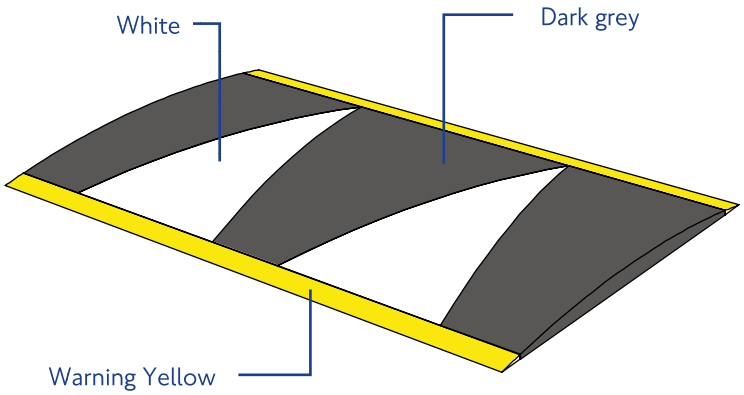
4.8.1 Rubbing plate and hinge point standards

Brow rubbing plates are an important safety feature on all moving pier brows, the clear indication of level changes and moving elements is crucial for customer safety on piers. It is also important to consider the rubbing plate as part of the broader wayfinding experience, as a highly visible object on the brow surface it allows the opportunity to utilise an effective, consistent and recognised visual language to aid in the smooth flow of passengers on and off the pier.

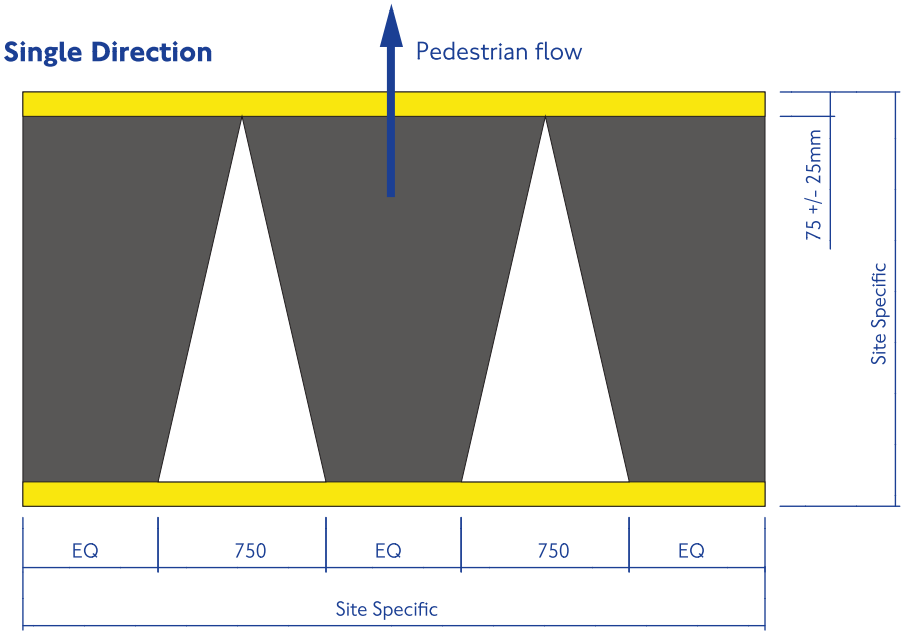
The use of chevron markings introduces a recognised standard derived from DFT standard road markings.

Rubbing plates will differ across the network and require site specific consideration, however the general principles outlined in this chapter should be adhered to in all situations.

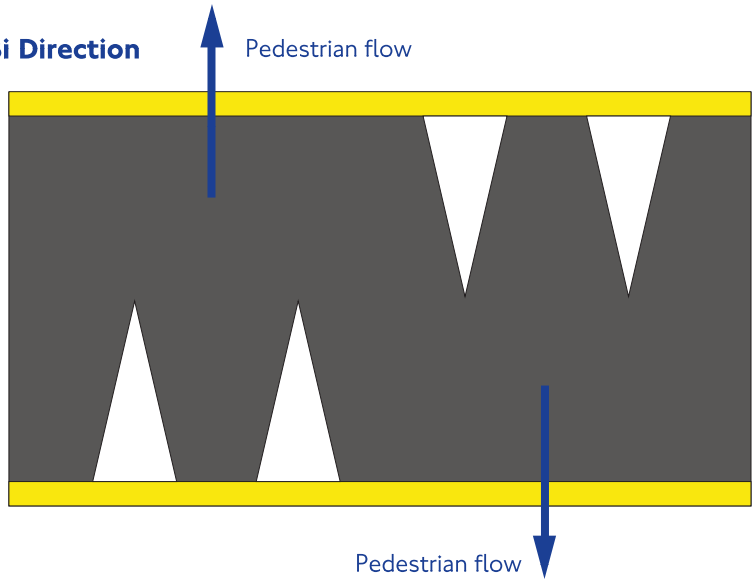
For further information refer to DFT Traffic Signs Manual: Chapter 5 Section 21.7 Markings on Road Humps.



A. Single Direction



B. Bi Direction



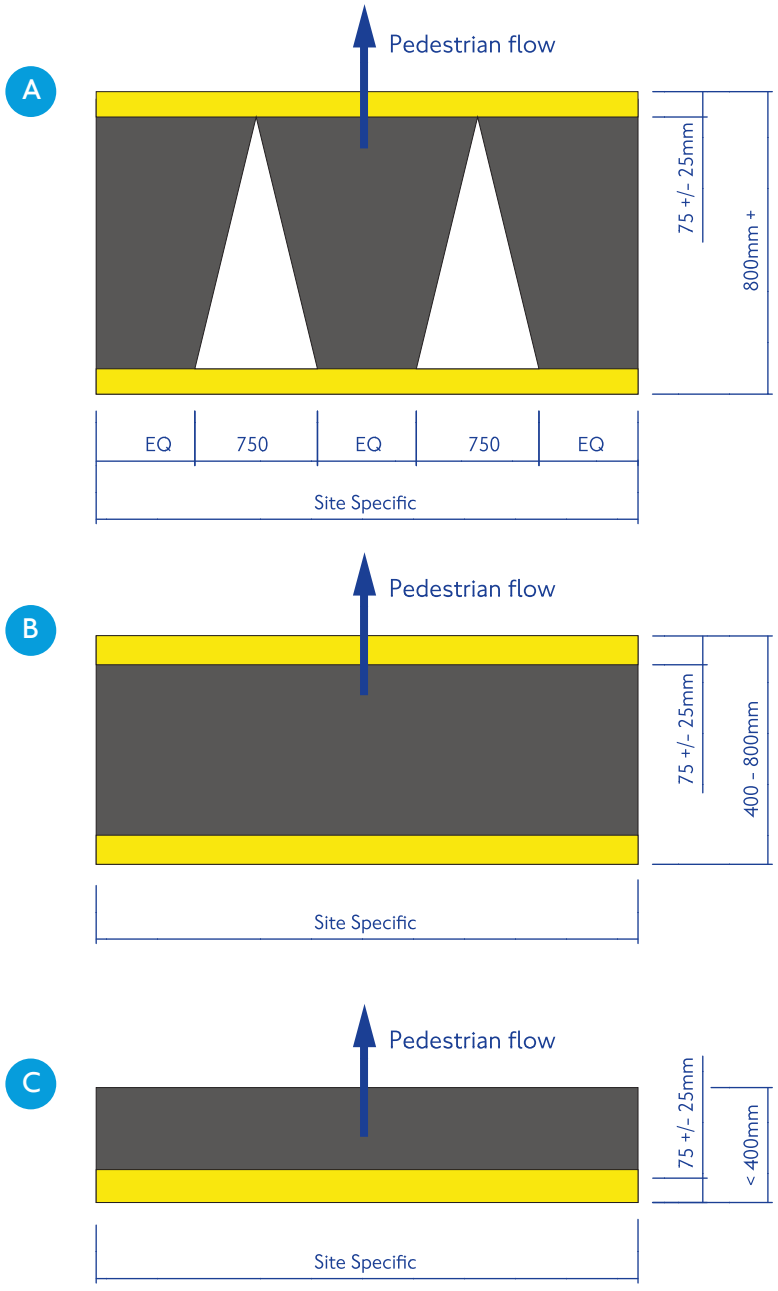
4.8.2 Rubbing plate and hinge point standards

Variations in the size and shape of rubbing plates and hinge points means each site should be subject to a site specific survey. Although rubbing plates and hinge points may differ in size and shape they should all adhere to the principles outlined below.

A If the rubbing plate or hinge point has a depth of 800mm or greater, the use of directional chevrons outlined in chapter 4.8.1 should be used.

B If the rubbing plate or hinge point is greater than 400mm and less than 800mm in depth, no chevrons shall be used, however the high visibility safety yellow edge strip should be applied to the leading and trailing edges.

C If the rubbing plate or hinge point is less than 400mm in depth then only the leading edge shall be finished with a high visibility safety yellow edge strip.



4.9 Navigational lighting standards

The Port of London Authority requires every pier on the Thames to have at least one set of navigational lights to assist the safe navigation of passing vessels.

Each set of lights consists of two lights, the first one being two metres above the deck of the pier, the second light being two metres directly above the first light. See figure 12.

On the south bank of the river the lights must be red and on the north side they must be green. The use of LED lights is recommended due to their low energy use and long life. See figure 13.

For more information on navigational lighting on the River Thames please visit the PLA website: www.pla.co.uk

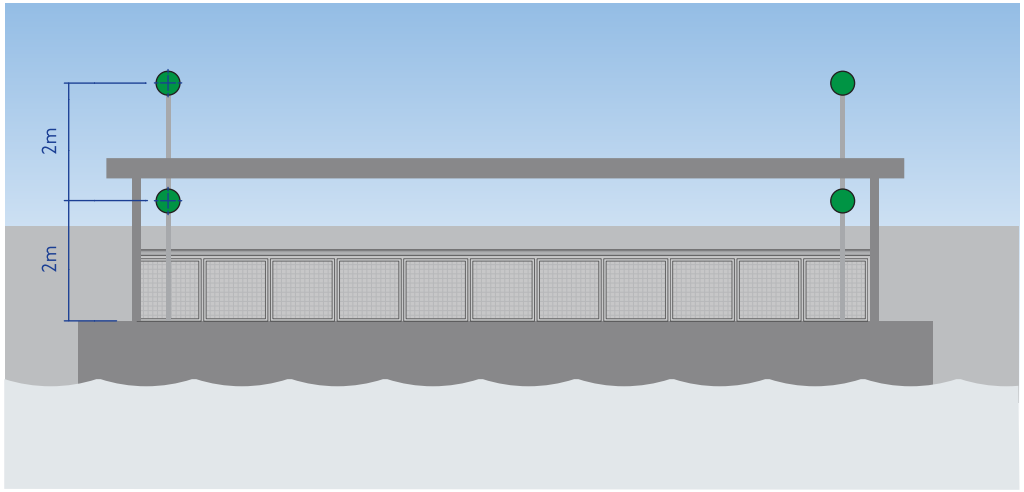


Figure 12. Navigational light positions.

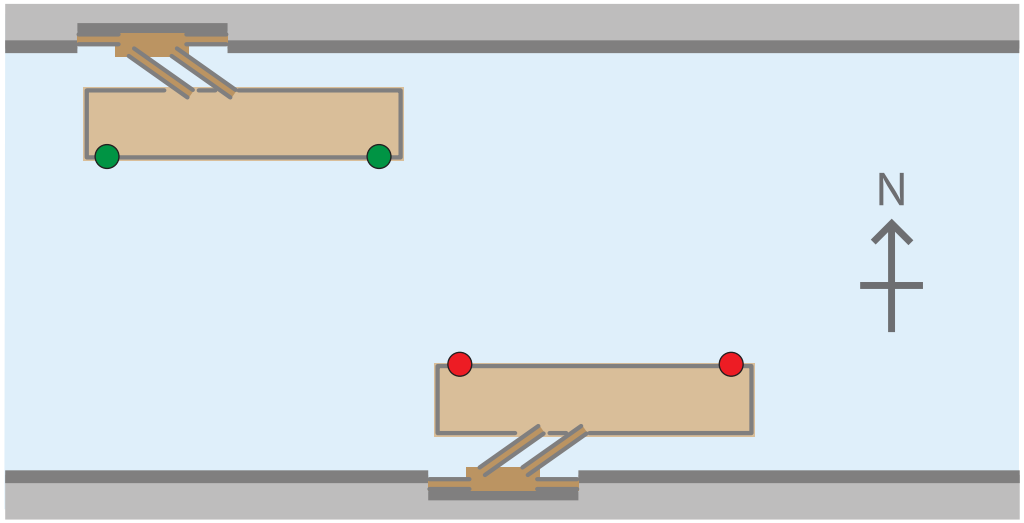


Figure 13. Navigational light colour, north and south bank.

4.10 Generic pier surfacing

A **Pier brows:** Pier brow surfaces are to be finished with a suitable high grip surface treatment that provides excellent slip resistance when wet. All surface materials must be suitable for use in exterior marine environments.

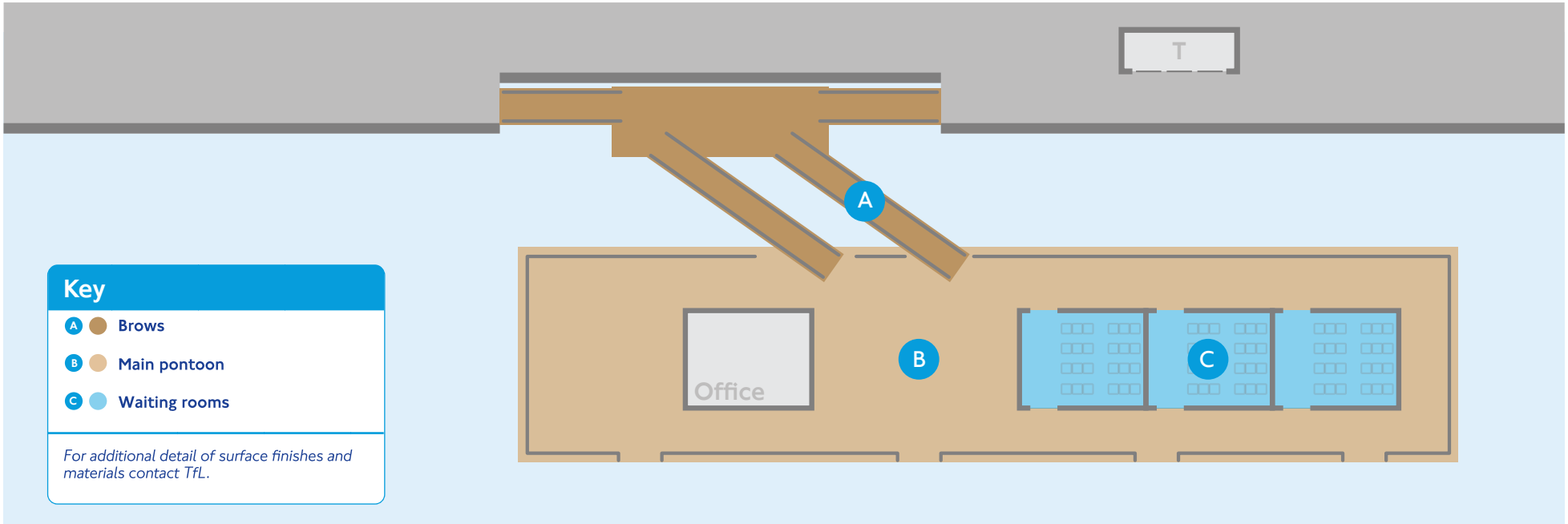
B **Main pontoon:** Main and core pontoon surfaces are to be finished with a suitable high grip surface treatment suitable for use in exterior marine environment.

Where an existing natural flooring material exists, such as timber decking, this should remain in place unless there is a significant safety hazard that forces surface replacement.

C **Waiting rooms:** Where appropriate flooring surfaces should be low maintenance, commercial grade nonslip flooring. In accordance with DIN 51130 classification, a minimum slip rating of R9 should be observed in interior applications and 10+ for external waiting areas. In general it is advised to select flooring products with enhanced acoustic dampening properties.

General Notes:
Flooring surfaces and surface treatments must be level. Where appropriate, levelling screeds and adhesives may be used to level out variations in the surface while retaining standard pontoon camber.

For more information on suitable surface materials please contact TfL.



4.11 Corporate manifestations

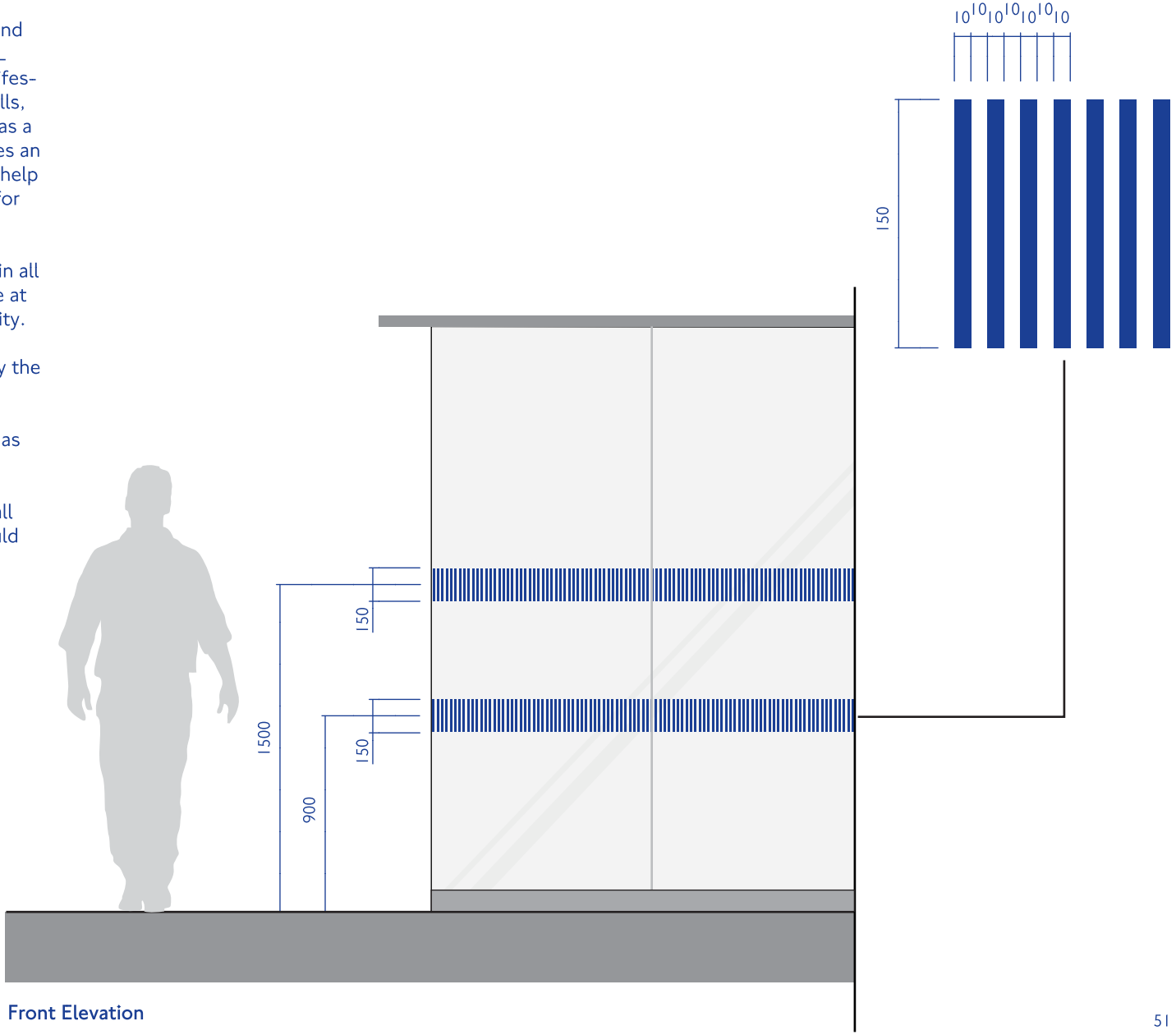
The TfL corporate manifestation is a common and standardised treatment used throughout the TfL transport network. The primary use on the manifestation is as a safety feature to highlight glass walls, gates and balustrades. Using the manifestation as a standard treatment throughout the network gives an additional and valuable visual language that will help to link the River offer to the broader Transport for London network.

This standardised approach should be adopted in all situations where glazed walls or panels could be at risk of passenger collision or areas of low visibility.

All waiting room glazed wall panels should apply the corporate manifestation.

All standard location and strip size dimensions, as indicated, must be adhered in all situations.

All vertical strips should have a 1mm radius to all corners. Vinyl colour on glazed application should match TfL Corporate blue Pantone 072.



Front Elevation

5 Common elements

5 Common elements

Contents

5.1 Ticket kiosk - design & location

The design of the kiosk should reflect the broader TfL look and feel while remaining sympathetic to local heritage and maritime features. Materials and finishes should be selected for their durability, ease of maintenance and aesthetic suitability.

Ticket kiosk must meet current building regulation requirements.

Ticketing kiosks should be located in a highly visible location in close proximity to the pier entrance.

Where appropriate, colour contrasting materials or finishes should be used to provide a visual break between horizontal and vertical surfaces. In order to satisfy BS:83000 a difference in light reflectance values of 30 points should be achieved between vertical exterior clad elements and pedestrian surfaces.

An angled roof surface is recommended to:
1. Discourage pigeon roosting and 2. Deter people climbing on the roof and 3. Minimise the build up of thrown objects.

Security: Kiosk should be designed to minimise potential security threats. Ideally no horizontal surfaces are left unattended outside of operating hours. Where kiosks are located outside of a secure location, security shutters should be fitted to cover glazed windows and panelling.

The roof structure must not incorporate cavities or recesses in which objects can be concealed.

Fire suppression: Where appropriate fire suppression systems should be installed to meet TfL guidelines.

Applied loads: A consideration must be made for applied loads, Structures must withstand crowd loading of 3.5 kN Crown Loading at 1100mm AFFL.

Heating, Ventilation and air conditioning: An allocation must be made for air conditioning and climate control of operator areas.

Shade systems or suitable glazing is necessary to reduce potential solar gain in periods of prolonged direct sunlight.

Operator counters: Sufficient space should be allowed for ticketing activities and support services for example: split level counters to increase usable counter space.

In compliance of the Equality Act, Induction loops for those with hearing loss should be installed as standard at all ticketing kiosk counters.

Additional facilities: Toilet facilities and customer shelter should also considered at larger sites.

At piers served by River Bus services, their ticketing machines must be present. See chapter 5.22.

Kiosks installed in external locations are subject to planning guidelines and approval from the local authorities.

For more information refer to the latest LRS ticket kiosk design and install documentation.

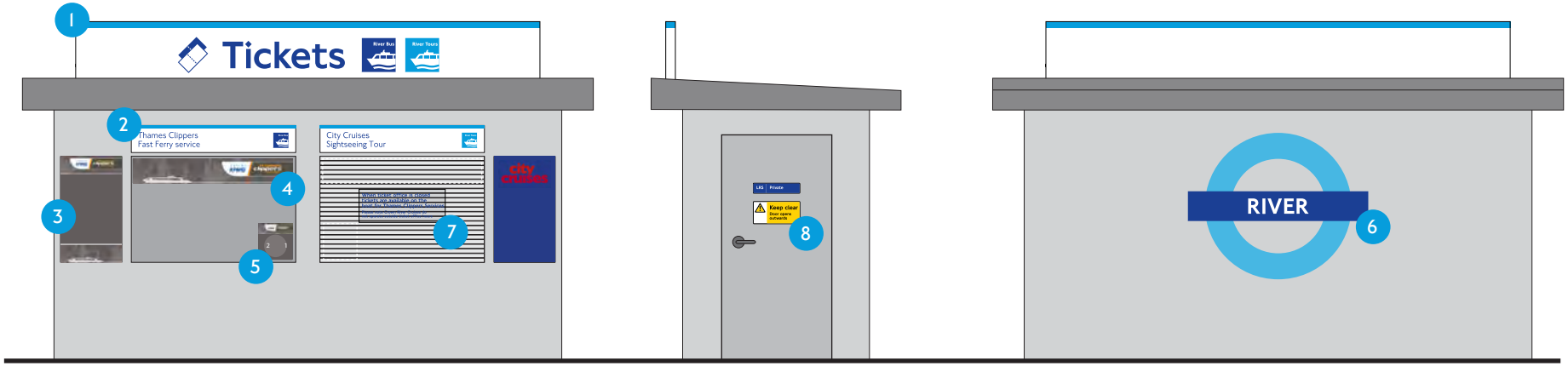
5.2 Ticket kiosk - signage

Ticket kiosk signage is an important aspect that must be considered and controlled appropriately. To avoid confusion and delays at ticket kiosks information needs to be presented in a clean and concise manner.

Tickets kiosks should be primarily seen as an extension of London River Services and as such should display signage in an appropriate hierarchy to reflect this. Ticket kiosks vary throughout the London Rivers network and as such site specific surveys will be required to assess the suitability and location of signage elements. However, the general principles outlined in the following pages should be adhered to where possible.

Tamper proof vinyls to be used in all exterior applications, and suitable anti graffiti overlays should be used.

1. **Main 'Ticket' header sign:** All ticket kiosks, as standard, should contain a main identifying header panel to identify ticketing and display relevant service information.
2. **Primary service indicator:** Service, operator and destination information will be displayed above the relevant operator kiosk windows.
3. **Operator branding and route information signs:** These are the main dedicated zones adjacent to kiosk windows for the display of operator signage. Branding, route information and timetable information should be displayed in this area.
4. **Secondary operator branding:** A secondary branding element can be used, when appropriate, for enhanced operator identification and operator specific travel information.
5. **Promotion panels:** An allocation of space in the lower inside corner of the kiosk window can be used for promotion branding, seasonal offers or route information.
6. **Kiosk modal graphic:** Where kiosk rear elevations are highly visible, the application of a rivers roundel can act as an additional long distance identifier.
7. **After hours ticketing information sign:** After hours ticketing information should be displayed on kiosk shutter systems where appropriate.
8. **Warning, safety and operational signs:** operational signage should be evident on all operator access doors, both internally and externally.



Front Elevation

Side Elevation

Rear Elevation

5.3 Leaflet Racks

Standard TfL leaflet racks provide a platform for the provision of a broad range of transport information and offer promotions. Leaflets racks can also provide information about local or river-related tourist attractions.

Leaflet racks may be positioned independently, on DRU poster frames or on customer information boards.

The dividers have no bases and so litter cannot clog the unit when temporarily empty. The ergonomic design and height within the poster frame allows wheelchair users and children to take a leaflet. The units can be retrofitted to previously installed LU standard poster frames. Flexible spacing of dividers allows a wide range of leaflet sizes.

The leaflet rack is constructed from cast aluminium with extruded supporting brackets. The powder-coated surfaces are self-cleaning and resistant to wear and tear.

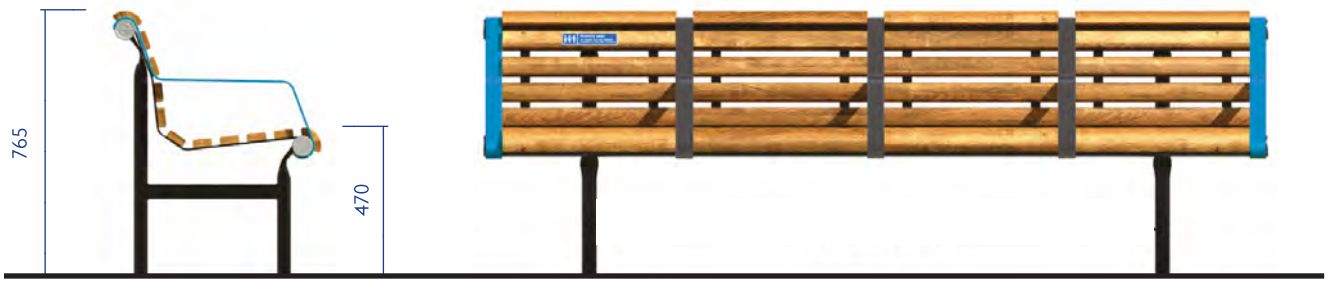
5.4.1 Seating and Furniture - Woodro

Woodro is designed for use in above ground interior applications not affected by LU's material and fire regulations. The design is economic, functional and ergonomic. The unit provides clear sight lines and has a clearly visible support-structure which prevents the concealment of suspect packages. The two outside arms are River blue to present a more visible unit for the visually impaired.

A standard unit has four seats. Units of differing lengths can be specified to suit operational and architectural requirements. Woodro is constructed from powder-coated steel and treated hardwood and is easy to install with minimum pre-site work on floors or walls. Arms and timber slats can be easily replaced on-site. All surfaces are self-cleaning and resistant to wear and tear.

The timber seats will require periodic maintenance.

Plan



Side Elevation

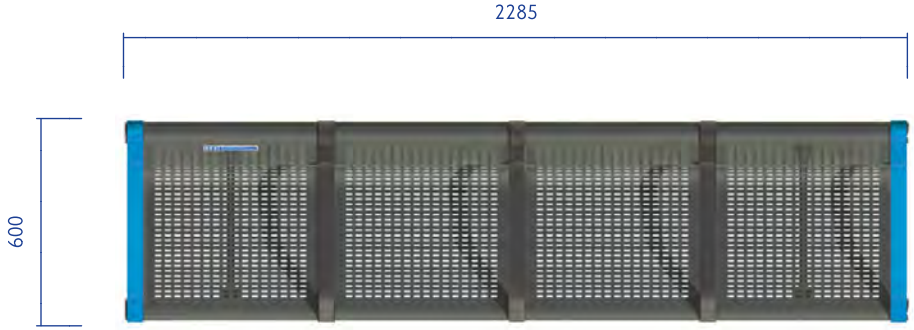
Front Elevation

5.4.2 Seating and Furniture - Centro

Centro is designed for use in exterior applications. The design is economic, functional and ergonomic. All surfaces are perforated and the unit has a clearly visible support structure to prevent the concealment of suspect packages. The two outside arms are rivers blue to present a more visible unit for the visually impaired.

A standard unit has four seats. Units of differing lengths can be specified to suit operational and architectural requirements. Centro is constructed from steel and is easy to install with minimum pre-site work on floors or walls. The powder-coated surfaces are resistant to day-to-day wear and tear. The arms and seat pans can be easily replaced on-site.

The cast end caps of Centro, Toro and Woodro are all branded with the corporate roundel.



Plan

Side Elevation

Front Elevation

5.4.3 Seating and Furniture - Perch variations

Contents

Perch seating can be utilised as an alternative to standard Woodro and Centro seating in areas with limited space or specific queueing or seating requirements.

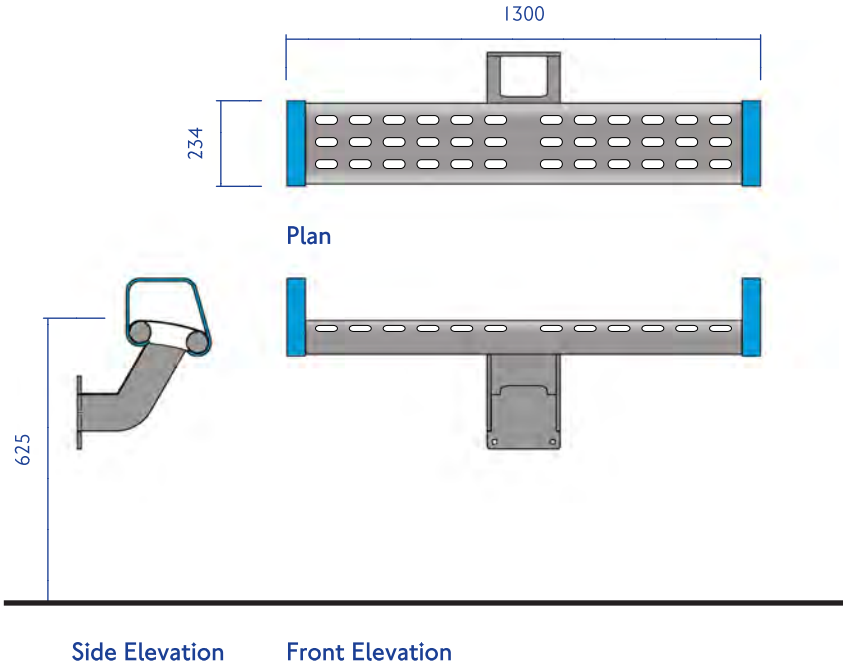
The two outside arms are rivers blue to present a more visible unit for the visually impaired.

A standard unit has two seats. Units of differing lengths can be specified to suit operational and architectural requirements. The perch is constructed from steel and is easy to install with minimum pre-site work on floors or walls. The powder-coated surfaces are resistant to day-to-day wear and tear. The arms and seat pans can be easily replaced on-site.

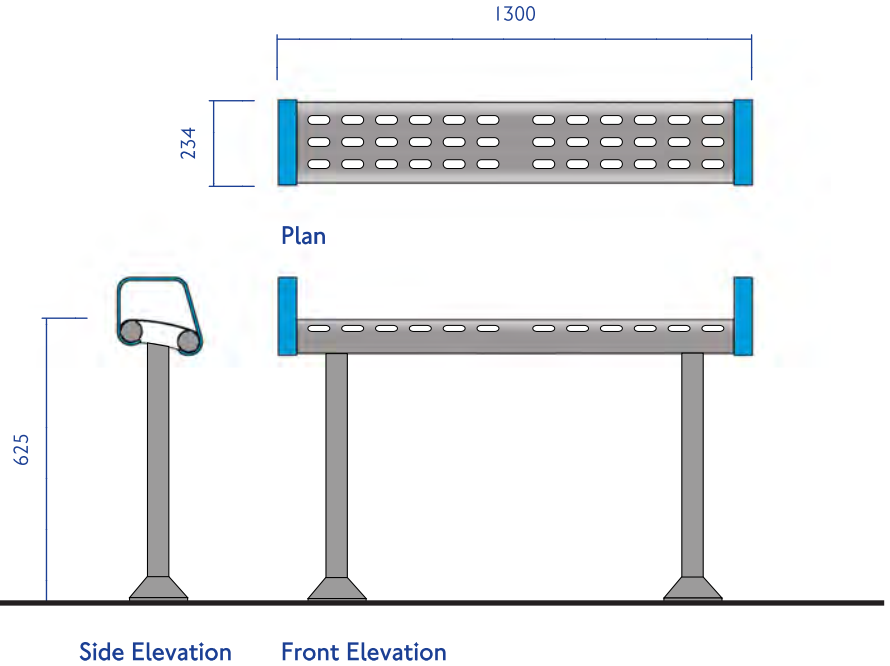
The cast end caps of perch are branded with the corporate roundel.

Colours, finishes and perforation details to match Centro and Toro seating.

Wall mounted Toro perch



Free standing Centro perch seat



5.5 Countdown Screens

Countdown screens display the iboat real-time arrival time and destination information. It enables customers to select the best method or route for their journey and provides reassurance that the service is operating as expected.

Countdown units are a standard size. They should be fitted in prominent locations. On installation, site work should be minimal. The screen is single-faced and is constructed from aluminium sheet, polycarbonate and LED electronics.

Countdown screens must be positioned in a highly visible place on the main pontoon in close proximity and within clear view of the relevant boarding points. An additional screen should be positioned at the pier entrance to provide service information to passers by.

5.6 Landmark London Shelter

Landmark London shelters offer a flexible and durable modular shelter that can be adapted to suit a variety of on and off pier situations. The adoption of the Landmark London shelter provides a consistent visual language and provides an aesthetic link back to the broader London travel network. River blue accents enhance visual recognition from a distance and help provide a route reinforcing feature to isolated or remote piers, jetties and landings.

Where there is no provision for covered seating or passenger waiting areas, where possible, Landmark London shelters should be used.

Seating options can include standard Landmark London cantilever and block perch seating, or , depending on local requirements, utilise the Centro, Woodrow and perch seat variations outlined in chapter 5.4.

For more detailed information on configuration and glazing options please refer to: LBSL Landmark London configuration standards document.

Side Elevation

Front Elevation

5.7 Help Points

Contents

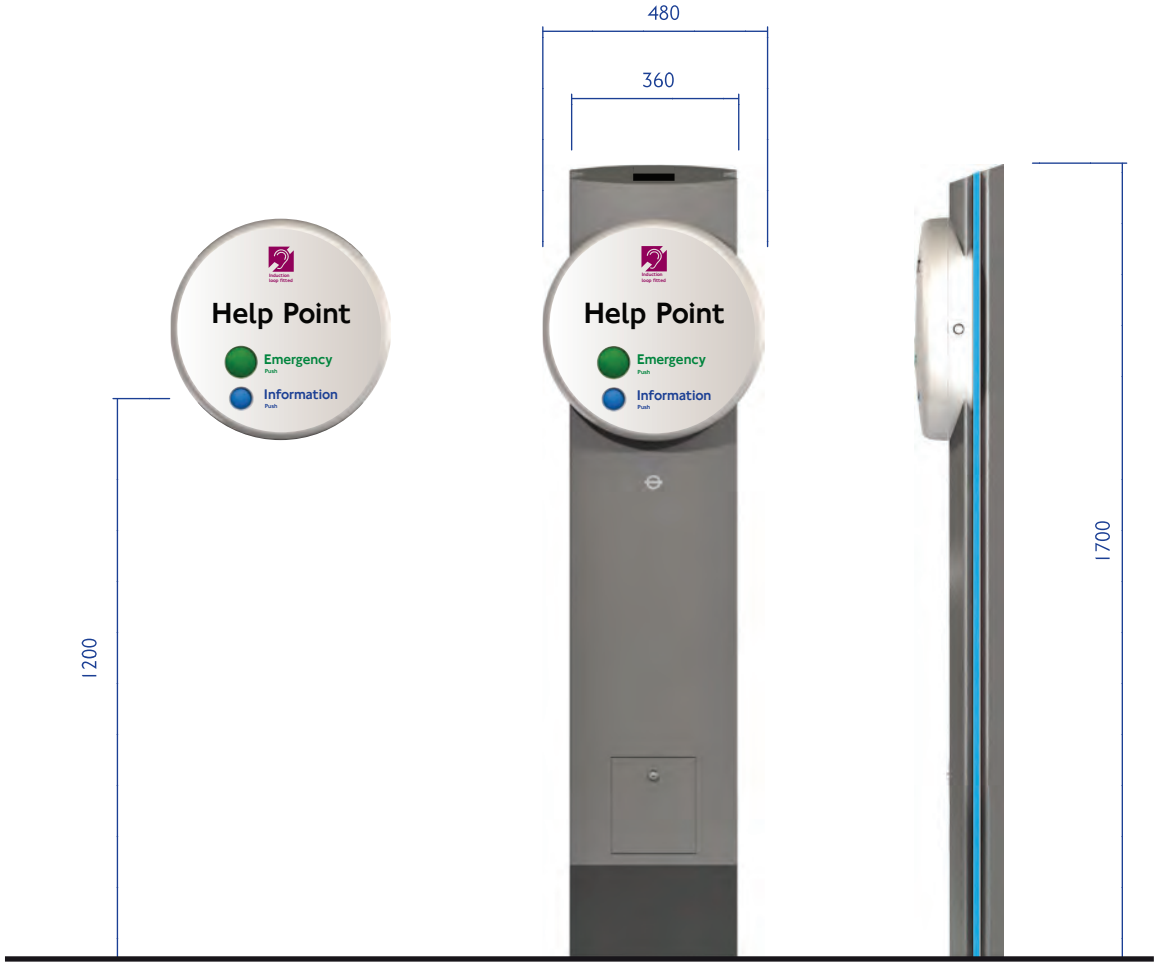
Ever since its first installation, Help Points have proved to be a significant security asset. Its presence has helped to cut crime, providing customers with a greater sense of safety. The unit has two functions: emergency and information. Operating any of the functions activates a CCTV system to provide greater security and a reference to operations staff.

The polyurethane pill unit is resistant to wear and tear. Minimal maintenance is necessary and is via a secure access point. The elimination of gaps and horizontal surfaces discourages litter and the concealment of suspect packages. Installation in prominent locations on walls, or on a base fixed to the ground, is straightforward and removal requires very little repair.

All Help Points must be signed above and monitored by a CCTV system.

The location of Help Points will require a carefully considered site survey, however, as a general rule they should always be located in a prominent location, with clear lines of site from waiting areas and access points to and from the pier. A help point should, where appropriate, be located on the main pontoon and in suitable locations at the extremities of piers and jetties. As a general rule, help points should be placed on walls or suitable vertical surfaces, if no such surface is available or lines of site are compromised, the use of a free standing plinth version should be used.

Pill modules should always be positioned at 1200mm to the centre of the information button.



Front Elevation
Wall mounted

Front Elevation
Plinth mounted

Side Elevation

5.8 AAV Bin Hoop

The highly visible colour, River blue, is chosen to contrast with the surrounding environment and be self-cleaning and resistant to wear and tear. A lack of flat, horizontal surfaces discourages people to place litter outside the bin and clear sacks help to prevent the concealment of suspect packages.

Installation is straightforward with a steel mounting bracket supporting the hoop, which is secured either with bolts to masonry or steel straps to available verticals. These should be correctly installed to avoid sharp edges, which may cause injury.

Upon removal the site requires little repair.
A degree of flexibility in the application of litter bins is permissible (i.e. mounting on walls or posts). This is a preferred corporate solution, but variations within TfL guidelines is permitted depending on environmental issues. When used in sites of special architectural interest, formal consent is required before installation.

Bin hoops should be positioned in visible, evenly distributed locations on the pier.

5.9 Storage Facilities

Contents

Storage facilities are required on all piers and an allocation for appropriate storage systems must be made to suit specific local need. For example, the storage of excess moveable barriers during seasonal periods of decreased passenger queuing.

When considering partition walls and/or racking systems, careful consideration must be taken as not to negatively impact on existing passenger facilities.

A standardised approach to storage units should be adhered to whenever possible. Free standing and exterior storage cabinets should be constructed from durable powder coated steel and manufactured to a minimum IP 22 rating. Shot peened skirting panels create a visual contrast with the deck surface and chamfered or rounded corners protect vulnerable edges from wear and tear. Where possible, chamfered top panel will assist with water runoff and deter the build up of rubbish.

Where appropriate, roller shutters shall be lockable, with key types dependant on use, function and content, for example:

Staff access: Standard triangular 7.8mm AF budget lock

Authorised staff access: FB1 key lock

Operators access: Standard square 8.1mm AF budget lock.

Cabinets to be finished in Graphite grey RAL 7024.

5.10 Lifebuoy system

Guardian Lifebuoy and lifebuoy housings are the preferred solution on all TfL piers, jetties and landings.

The Guardian lifebuoy housing, in high visibility safety red, is constructed of durable, low maintenance materials and offers easy inspection and maintenance. Polyethylene lifebuoys, housed internally, offer a highly durable buoyancy aid suitable in the most adverse of conditions.

Lifebuoy units should be located in highly visible locations close to the waters edge, within easy access of all passengers and staff. Site specific survey will be required to establish the most suitable positions on all piers.

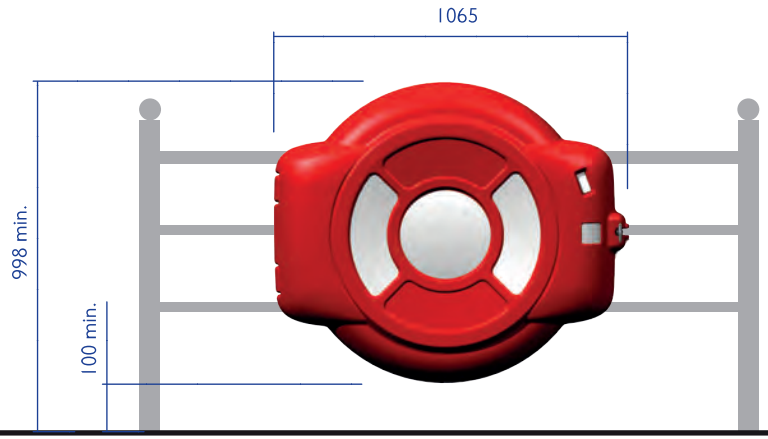
Guardian 750 containered Lifebuoy units supplied by Glasdon of Blackpool. For additional product information please refer to appendix section 1.

Stand-alone unit

Side Elevation - Vertical

Front Elevation - Vertical

Wall and rail mounted unit



Front Elevation - Horizontal

5.11 PA Systems

Clear, concise and audible emergency information can be provided to customers through PA speakers. Acoustic requirements are of primary concern when choosing a location for installation, provided that the final speaker placement is sympathetic to the environment. All installation and maintenance is to be carried out by expert contractors.

This is a preferred corporate solution, but variation within TfL guidelines is permitted depending on environmental issues. Please contact TfL for more information on PA systems.

5.12 CCTV

The provision of CCTV equipment gives customers a greater feeling of security and well-being.
The design of each CCTV installation may vary in accordance with specific locations, but should always be robust in construction. A degree of flexibility in the application of cameras is permissible (i.e. mounting on walls, ceilings or posts). If the cameras are to be installed at listed or heritage sites, heritage groups should be consulted prior to work commencing.

No mechanical maintenance is required. All parts are to be secure and to be removed by a professional contractor only. Site work on installation is minimal and all cabling is to be fully integrated. This is a preferred corporate solution, but variation within TfL guidelines is permitted depending on environmental issues.

5.13 Safety barriers and gates

Customer and staff safety on pier must be the primary concern of all architectural and operational features, none more so than at the waters edge.

Vessel gates in the perimeter railings of a pier must be at least 1200mm wide.

Gates must be spaced accordingly along the berthing face to suit the specific requirements of intended berthing vessels.

To ensure boat crews have sufficient space for their mooring activities the perimeter railings should be at least one metre from the edge of the pier.

LRS stainless steel gate latch system should be used whenever possible. See figure 14.

For more information on the LRS stainless steel gate latch please contact TfL.

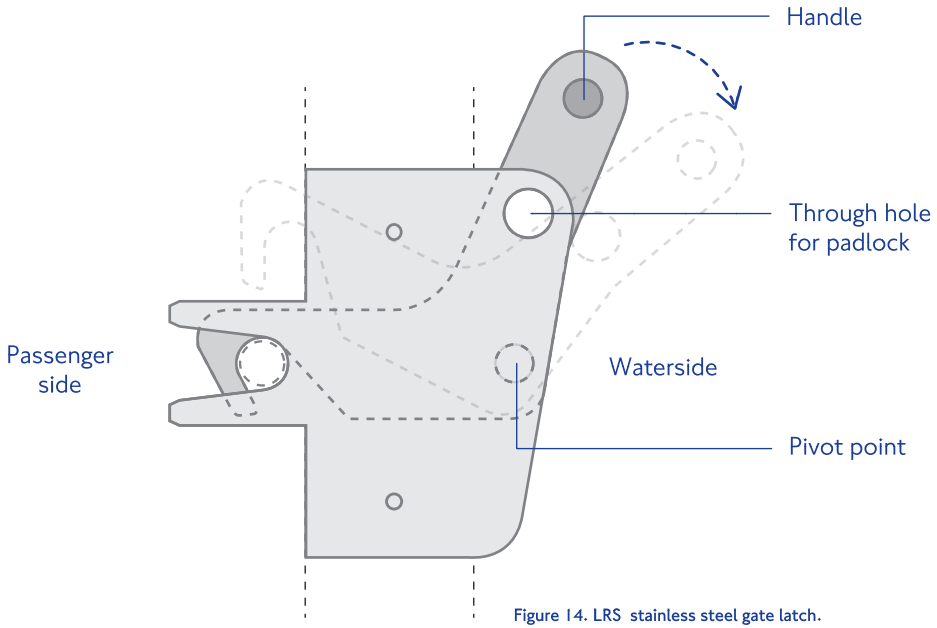
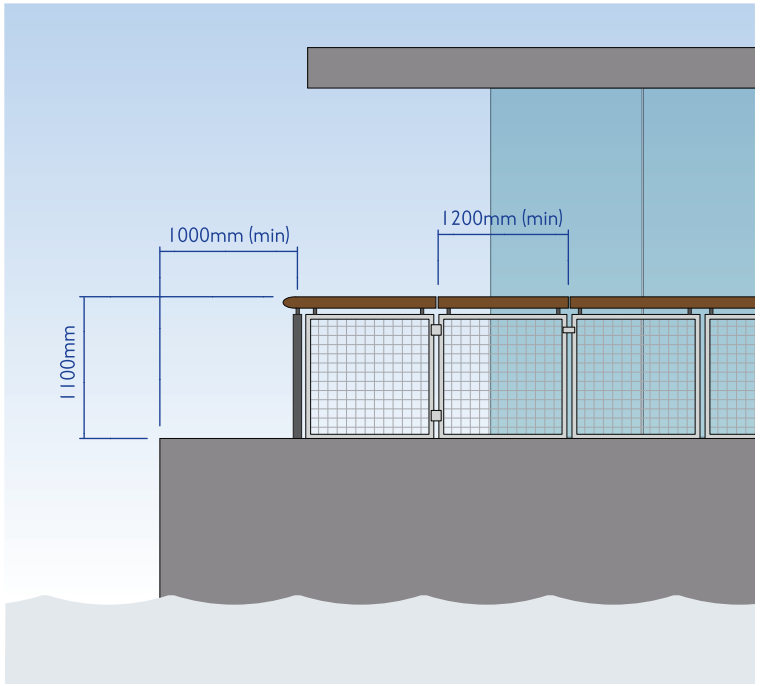


Figure 14. LRS stainless steel gate latch.



5.14 Pier security - gates and locking system standards

Piers on the River Thames network must have the facility to secure the pier from the embankment via lockable access gates at the pier entry and exit points.

When appropriate, unstaffed piers without manned entry point ticketing facilities should be permanently secured as a matter of course.

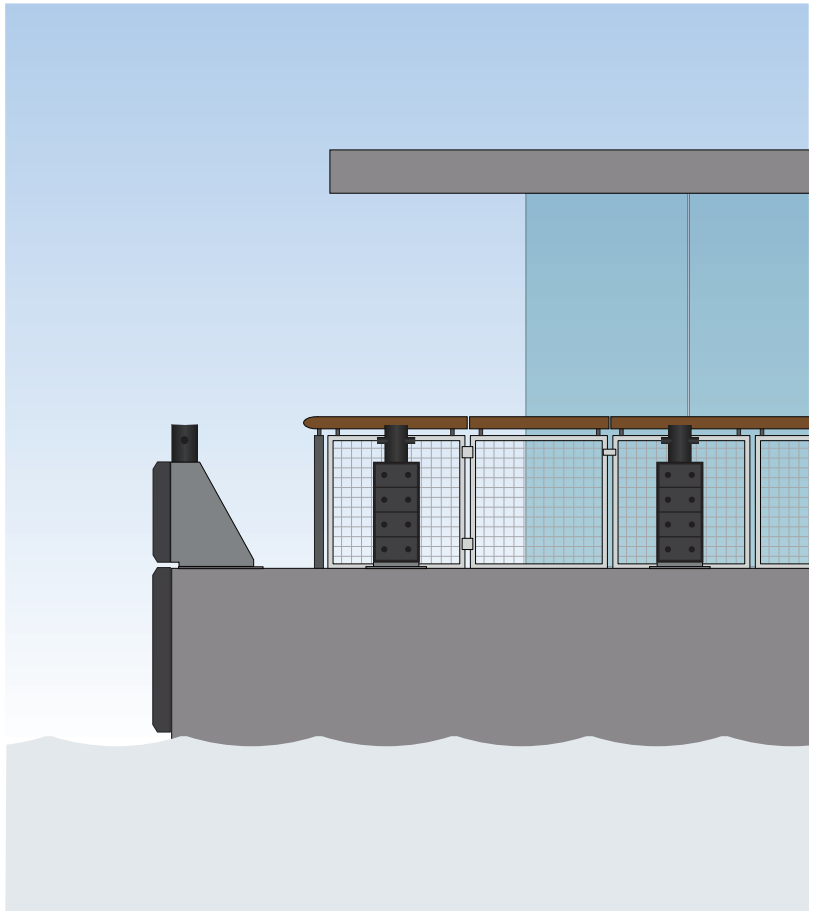
These smaller or less frequented piers can be opened remotely via keyless fobs. A touch point receiver terminal at the berthing point activates the gate opening system to allow access. If such systems are deployed, automatic exiting systems must be in place to allow passengers to freely exit the pier.

For more information on pier security and automatic gate locking systems please contact LRS.

5.15 Mooring bollards

Mooring bollards should be located at regular intervals on all berthing faces of the pier. All piers served by River Bus services must use mooring bollards that are raised above deck height. Raised bollards allow boat crews to tie up and untie quickly.

Bollards and their means of attachment to the pier structure must be designed and approved by a certified marine architect to ensure they are fit for purpose and the appropriate factor of safety is built in.



5.16 Fire extinguishers & maintenance protocol

Fire extinguishers must be present on all piers.

Fire extinguishers shall be situated ready for use at easily visible locations, which can be reached quickly and easily at any time in the event of a fire.

Extinguisher housings must be located in such a way that their serviceability is not impaired by the weather, vibration or other external factors.
Fire extinguishers shall be provided with devices which indicate whether they have been used.

Particular attention should be given to positioning portable fire extinguishers in periodically unattended spaces. Generally, a number of extinguishers should be sited at, or adjacent to, the entrance to such spaces having regard to the possible need to attack a fire from outside the space as well as from inside.

The number and location of fire extinguishers shall be determined by detailed site specific fire risk assessment process carried out by a competent contractor.

Maintenance protocol: Fire extinguishers must be regularly check by a certified contractor in accord-ance with LRS maintenance procedures.

5.17 Water supply cabinets

Water supply cabinets must be present on all Piers. The water supply cabinet offers a secure, reliable connection to the mains water supply. Users will need to supply their own hose and coupling system to correctly access the water supply.

All LRS water supplies will terminate with an Eaton Hansen LL6KP31-BS-303 stainless steel self sealing, quick disconnect coupling (male). To connect, users will need an appropriate Eaton Hansen female coupling, LRS recommend part number LL6HP31-BS-VAA.

All installations should allow a clear working area around the water cabinet of 600mm.

The number and location of water supply cabinets shall be determined by a site specific survey by a competent contractor.

Maintenance protocol: Water supply cabinets must be regularly check by a certified contractor in accordance with maintenance procedures.

For more information on water supply cabinets please contact LRS.

5.18 External switchboard cabinets

In situations where switch board racking is located externally or located in an isolated or exposed area, retrofitted cladding should be considered. Units clad in a graphite grey RAL 7024 will help to reduce their visual impact and emphasise the presence of more relevant features in close proximity i.e. Help points, fire extinguishers etc.

All cabinet cladding must be rated to a minimum of IP22 and be finished with a relevant LRS service indication label.

Chamfered top panels will enclose units preventing the concealment of suspect packages and prevent the build up of litter and pigeon detritus.

Rounded corner profiles to all edges will reduce impact for users and reduce damage to vulnerable edges.

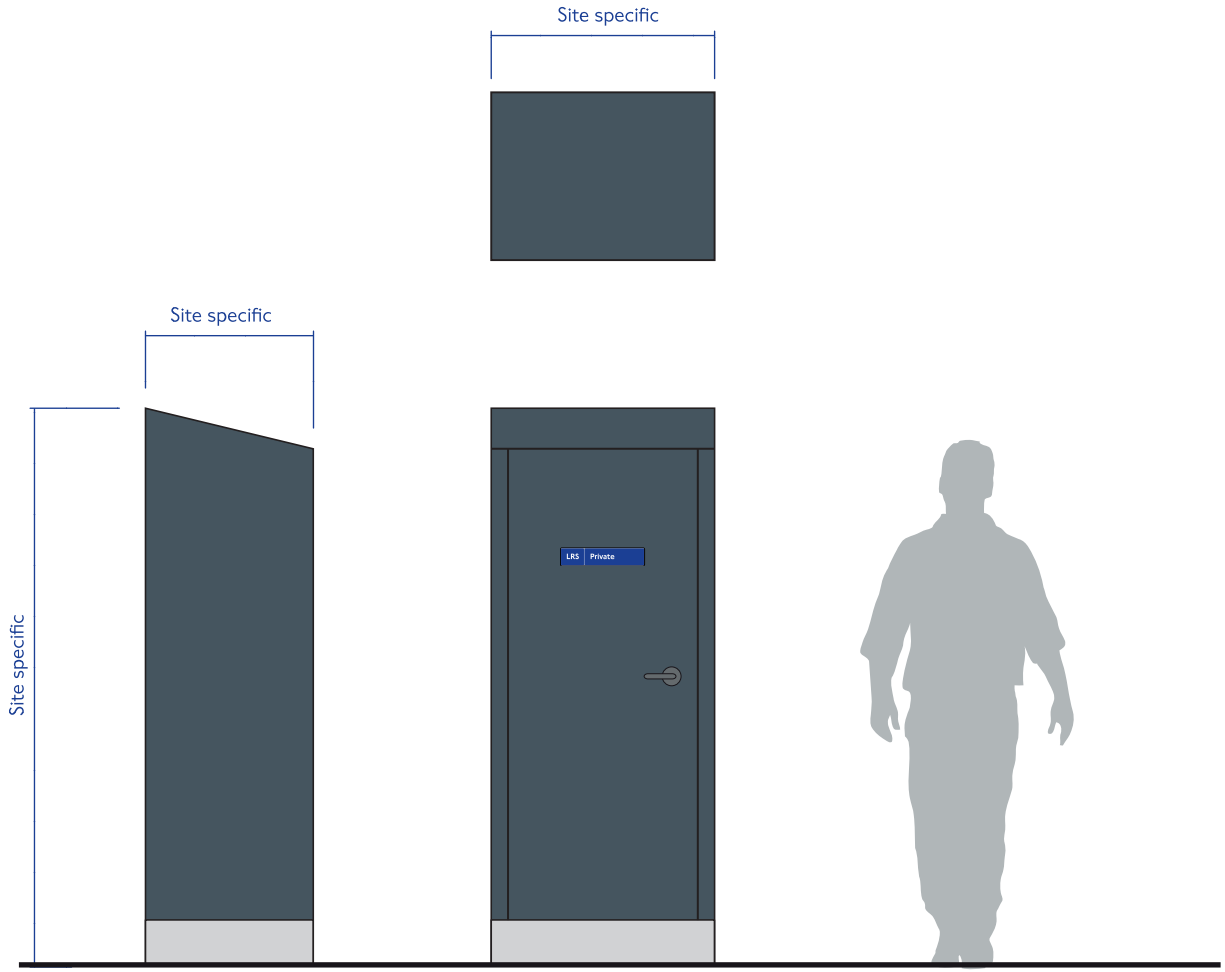
Shot peened stainless steel plinths will create a visual contrast and protect the most vulnerable areas from wear and tear.

A lockable hinged access door shall be fitted with sprung latch or quarter turn locks to suit access requirements as described below.

Staff access: Standard triangular 7.8mm AF budget lock

Authorised staff access: FB1 key lock

Operators access: Standard square 8.1mm AF budget lock.



5.19 Environment boards

Environment boards offer insight into the local natural environment via freestanding printed information panels.

Environment boards should be considered at appropriate sites as a means to engage customers in the local surroundings. For more information on environment boards and there implementation please contact TfL.

5.20 Salt Bins

Salt bins should be located on all piers where there is slip risk and potential for ice buildup.

Salt bins should be located in easily accessible location at or close to boarding points and brow entry/exit points. Their placement should as discreet as possible and should not obstruct the flow of passengers or staff.

5.21 Tensabarrier

The temporary barrier system is a highly flexible and efficient people management system that can also help warn customers of hazards or restricted areas. The spring-loaded webbing pulls out of the hub and can be connected to another post or wall bracket. The system can be arranged by one person into multiple combinations. Corporate blue webbing with roundel motifs should be used.

The temporary barrier will be used to control customer flow, create queuing systems on the piers and as a contingency barrier used to warn customers of hazards or restricted areas.

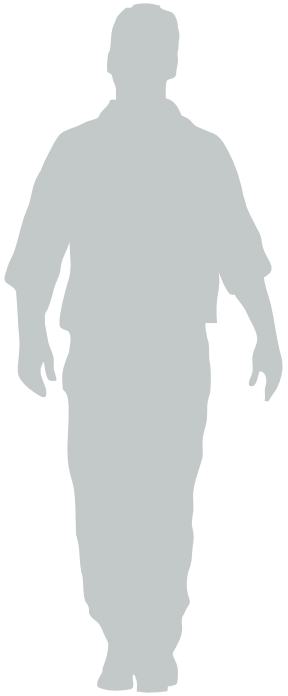
Tensabarrier high units can be used to help reinforce boarding point locations and offer flexibility during route or service changes.

Post top sign frames can be incorporated into the queuing system for the display of operator travel information, promotion and queue identification.

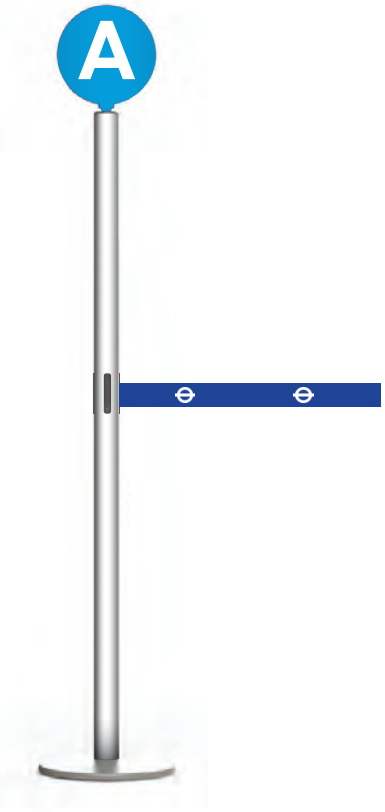
Barriers should be stored appropriately in a non-customer area or storage cabinets when not in use.

In high traffic areas a fixed queuing systems could be considered.

Standard Tensabarrier
Brushed stainless steel, corporate blue webbing with roundel motif.
Assembled weight 12kgs.



Post top sign frame
Optional removable A4 Post top sign frame.



Tensabarrier high unit.
Tensabarrier 1900mm high unit with point letter boarding point sign and receiving splines for webbing.
Assembled weight 19kgs.

5.22 Ticket machines

Thames Clipper ticket machines should be present on all piers serving River Bus services.

Although there is no standard design for the River Bus ticket machine the following recommendations should be taken into account when developing ticketing machines:

To prevent the concealment of suspect packages and the build up of litter, flat surfaces, open voids and undercuts should be avoided.

To ensure Equality Act compliance all operable controls should be no higher than 1200mm from the finished floor level.

Rounded corner profiles to all edges will reduce impact for users and reduce damage to vulnerable edges.

Durable materials such as low grade stainless steel with a powder coated finish should be used.

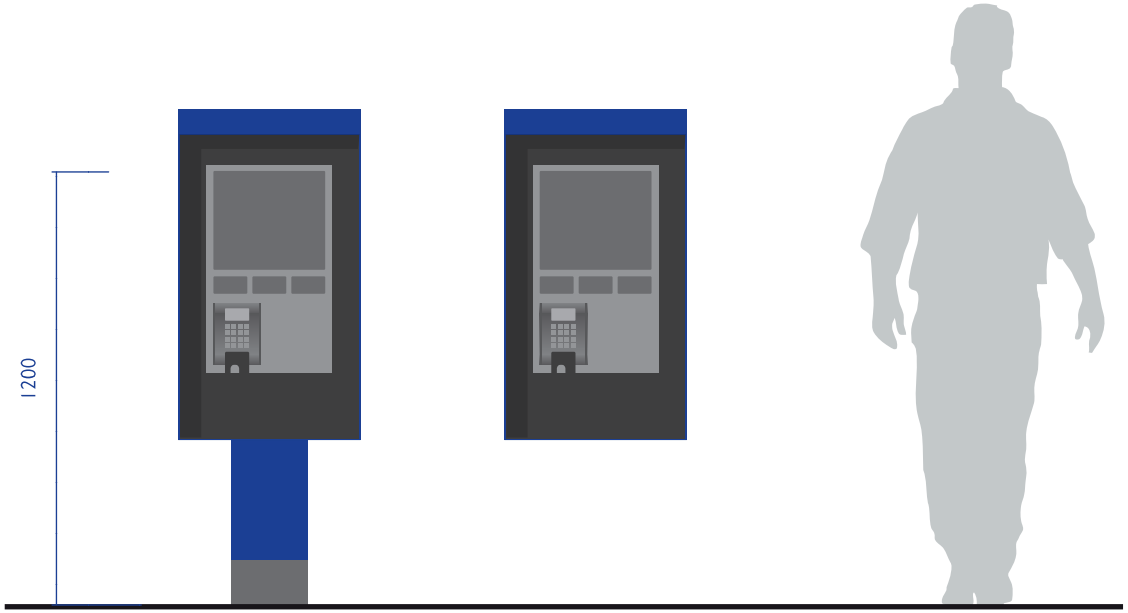
Shot peened stainless steel plinths will create a visual contrast and protect the most vulnerable areas from wear and tear.

Free standing with a pedestal base shall include a treated 9mm thick exterior grade ply back board with earth studs fitted to both the enclosure and door.

Ticket machines will require a 240V AC power supply.

All units should contain a BS/EN Standard Electrical Hazard symbol (22 x 22mm) positioned adjacent to the access lock.

All signage elements should be manufactured and applied in accordance with TfL signage specification standards, preferably tamper proof with concealed fixings.



Pedestal Base

Wall/rail mounted

6 Wayfinding signage

6 Wayfinding signage

Contents

6.1 Introduction and principles

Introduction

A clear and consistent rivers wayfinding strategy is an important element in the drive to enhance the profile of the London river services network. Wayfinding signing should engage, guide and assist customers from key transportation nodes to London's network of river piers, ultimately linking the Rivers network to the broader London Transport network.

Good signing is vital for TfL River to project a consistent, modern and professional corporate image, and is essential to the smooth running of piers.

The design, layout and content of each and every sign is a considered asset to enable TfL and LRS to project an image of efficiency, consistency and modernity. Compromising the design or production quality would weaken the effectiveness of the signing and the corporate image.

It is important to understand that the customer journey on the Rivers network often begins from adjacent transport nodes, as such, there needs to be clear signing from bus stop or station exit to pier entry. Where possible the existing sign systems along this route should reinforce the rivers identity along the customer journey.

Local authority signage systems can be adapted to include pier directional information, however, this must be assessed on a site by site basis and the necessary approvals must be granted by local planning authorities.

Due to the varied complexity of stations, there can be no absolute rules. The fundamental principle of clear, ordered information which is consistent with that shown on LUL vicinity maps and guides, is extremely important for customers to continue their journey effortlessly from the Underground station to their intended destination.
Quality control is vital to ensure accurate colour matching. Colour samples and references can be found in the separate 'London Underground colour standards for identity and information' booklet.
A4-size NCS colour swatches can be purchased from:

Edgebrite Limited
60b High Street
Bridgnorth
Shropshire WV16 4DX
Telephone 01746 767500
or
Langford & Hill
38-40 Warwick Street
London W1R 6LS
Telephone 020 7437 9945

6.1.1 Sign family

1a **1b** **1c** **Directional information signs at transport nodes**
Sign on exit from adjacent transport nodes should incorporate pier location and directional information.

2a **2b** **Directional information signs - Legible London**
Legible London signage family adaptions for pedestrian street signing and interchange totems.

3a **3b** **Long distance identifiers**
Rivers banner and canopy signage for long distance identification.

✱ Refer to typical route plan and typical layout elevations that follow.

6.1.2 Typical route plan

Contents

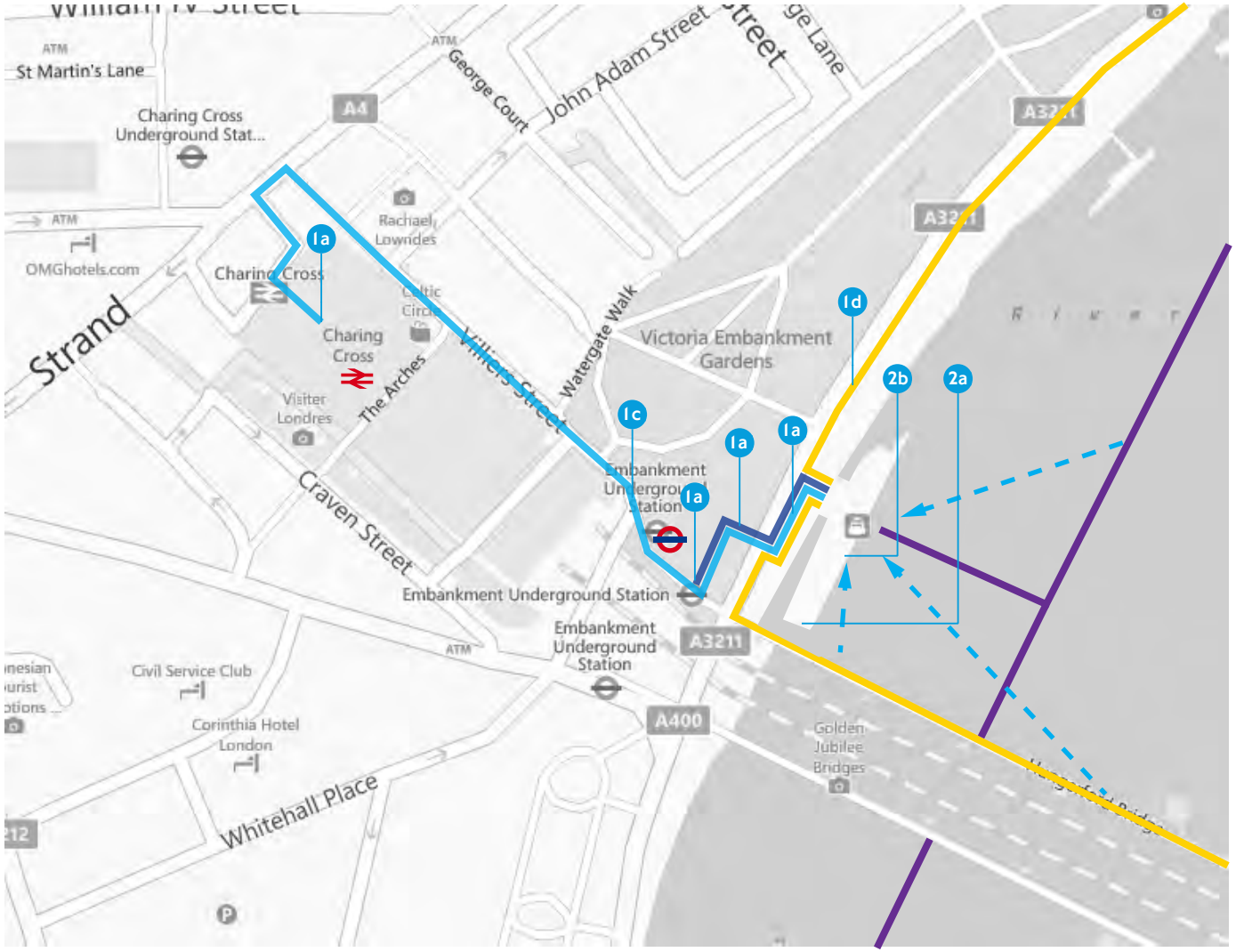
Key

1. Signs directing from transport nodes
2. Signs on route
3. Long distance identifiers

For details of these sign types and applications, see the examples on the following pages.

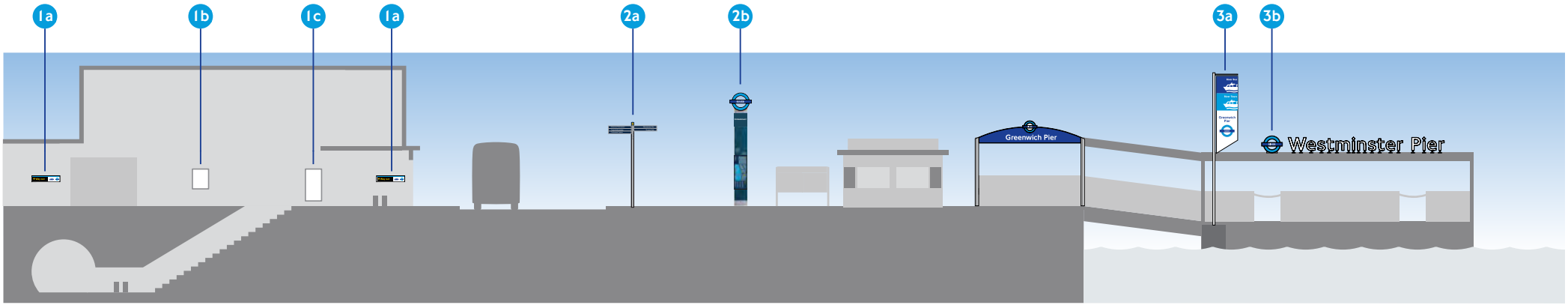
- Route from overground stations
- Route from underground stations
- Pedestrian routes
- River boat routes
- Key lines of sight

2b *The single number refers to a group of signs which have the same function, as described in the generic wayfinding principles. The letter refers to a specific sign type.*



6.1.3 Typical layout elevation - the customer journey

Contents



Adjoining transport nodes - Signs on exit. Legible London Rivers adaptions at decision making points along route Long distance identifiers - Pier identification signage.

Key

1. **Signs directing from transport nodes**
2. **Signs on route**
3. **Long distance identifiers**

For details of these sign types and applications, see the examples on the following pages.

2b *The single number refers to a group of signs which have the same function, as described in the generic wayfinding principles. The letter refers to a specific sign type.*

6.2 Directional information signs at transport nodes

Contents

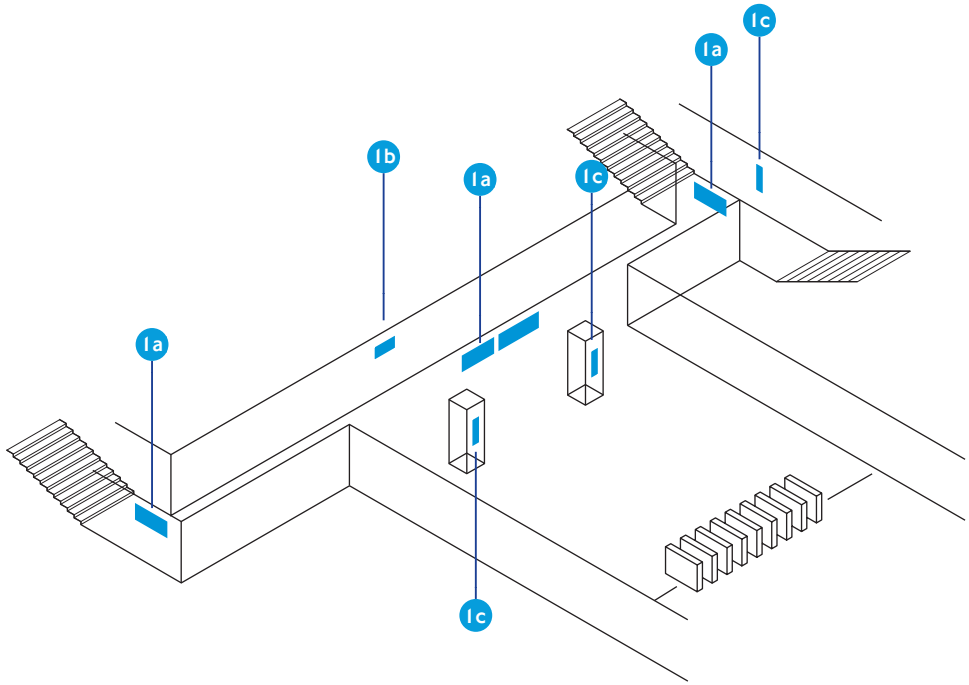
Directional wayfinding signage at transport nodes are a key element in the customer journey. These are critical decision making points and clear, legible signage prevents confusion and facilitates a stress free connection between transport nodes.

Clear directional signage must be present at all adjacent transport nodes. If no such information exists on current signage systems then Pier name, Rivers roundel and tours logo, if applicable, must be added - see sign type 1a.

Where wall mounted directional information signage exists, the inclusion of pier directional information must be present - note it is not always necessary to apply rivers and tours logo's in this instance.

Where multi- exit station scenarios exist - Exit guides must contain clear directional and location information to adjacent piers.

For more information on London Underground signage standards please refer to: London Underground signs manual. Issue 4, Oct 2002



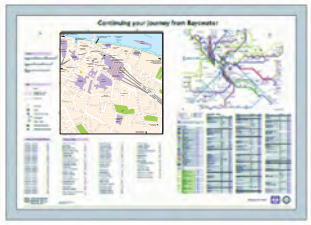
1a

* All overhead wall mounted and hanging directional signs and variations, must adhere to TFL corporate signage guidlines.

1c

* Wall mounted exit guide, showing selective list of landmarks, amenities and transport services.

1b



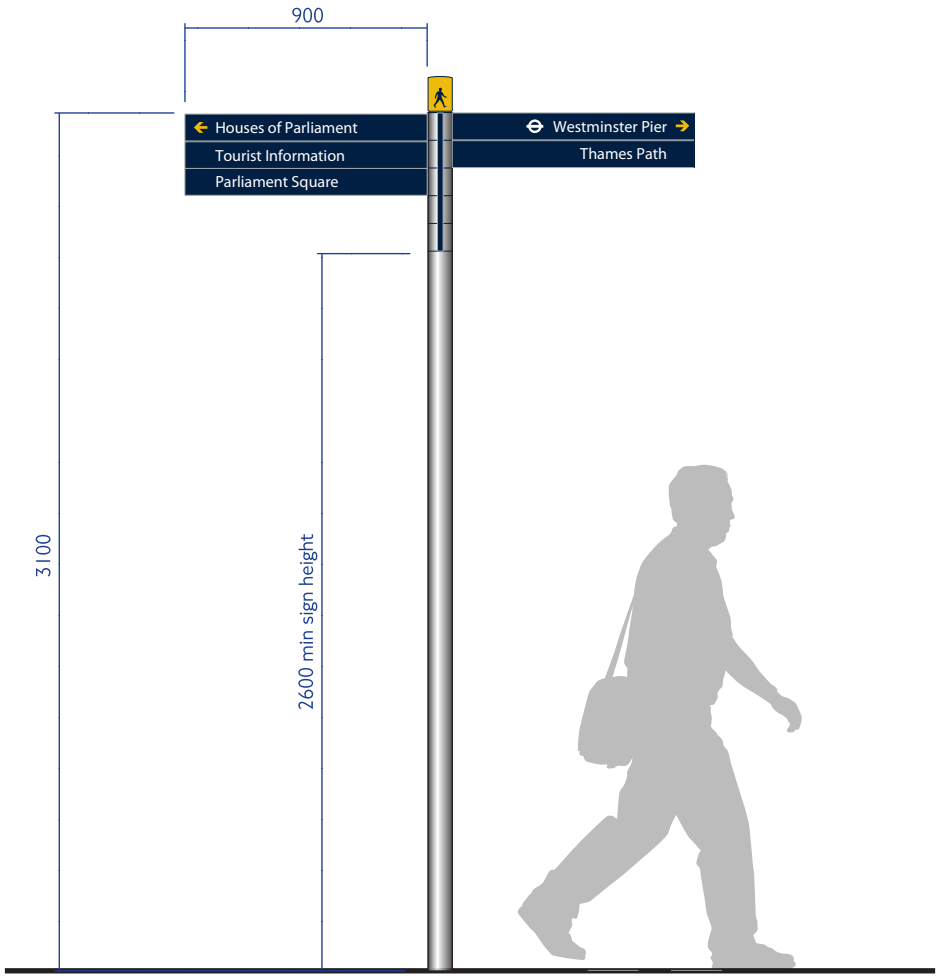
* Standard printed vicinity maps showing comprehensive list of all local amenities and bus spider map

6.2 Finger posts - Legible London sign family

Where possible the utilisation of existing TfL signage infrastructure should be used, for example the Legible London signing system is an ideal opportunity to provide directional information to and from piers. Where existing Legible London finger post signs are present, pier directional information should be displayed.

All new Legible London signage system installations adjacent to TfL river piers must include pier name and directional information.

For more information on Legible London signage system standards please refer to:
http://www.tfl.gov.uk/microsites/legible-london/



Standard finger post
Front Elevational

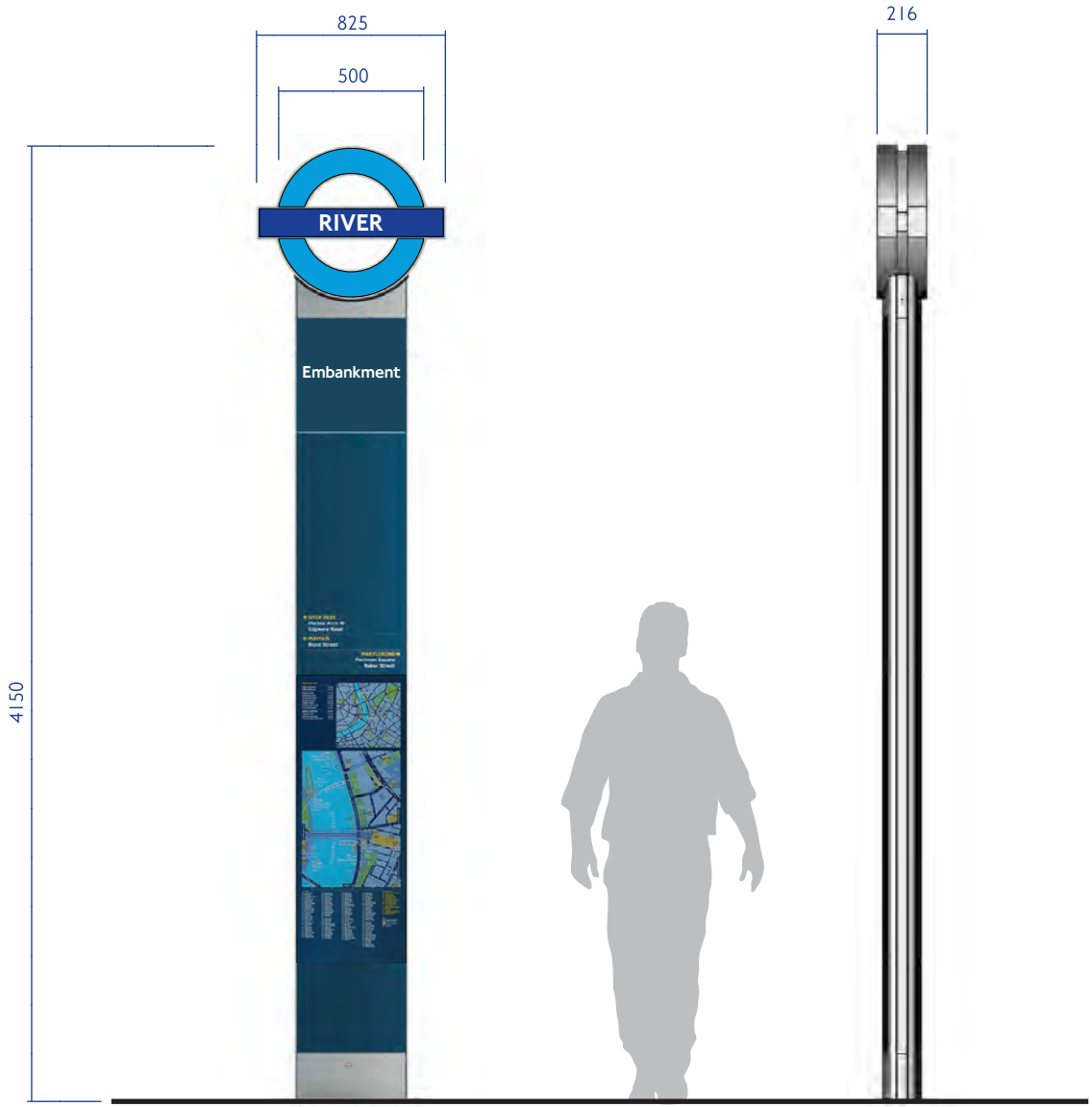
6.4 Rivers totem - Legible London sign family

As part of a broader standardisation of the London travel network, Legible London totems have been adapted for use on the Rivers network. The Legible London totem provides an on street identification of River services and a visual indicator of pier location. As with all Legible London sign system totems, maps, location, proximity and directional wayfinding information is displayed.

Their height ensures they are visible from a distance and can be spotted above a crowd of people.

Site specific surveys will be required to determine the most suitable location. Signs should be located on main thoroughfares with a high volume of foot traffic as this sign not only indicates but is also a key route reinforcing sign that can be identified from distance. Where possible, the rivers totem should be visible or within close proximity to adjacent transport nodes.

For more information on Legible London signage system standards please refer to:
http://www.tfl.gov.uk/microsites/legible-london/



Front Elevation

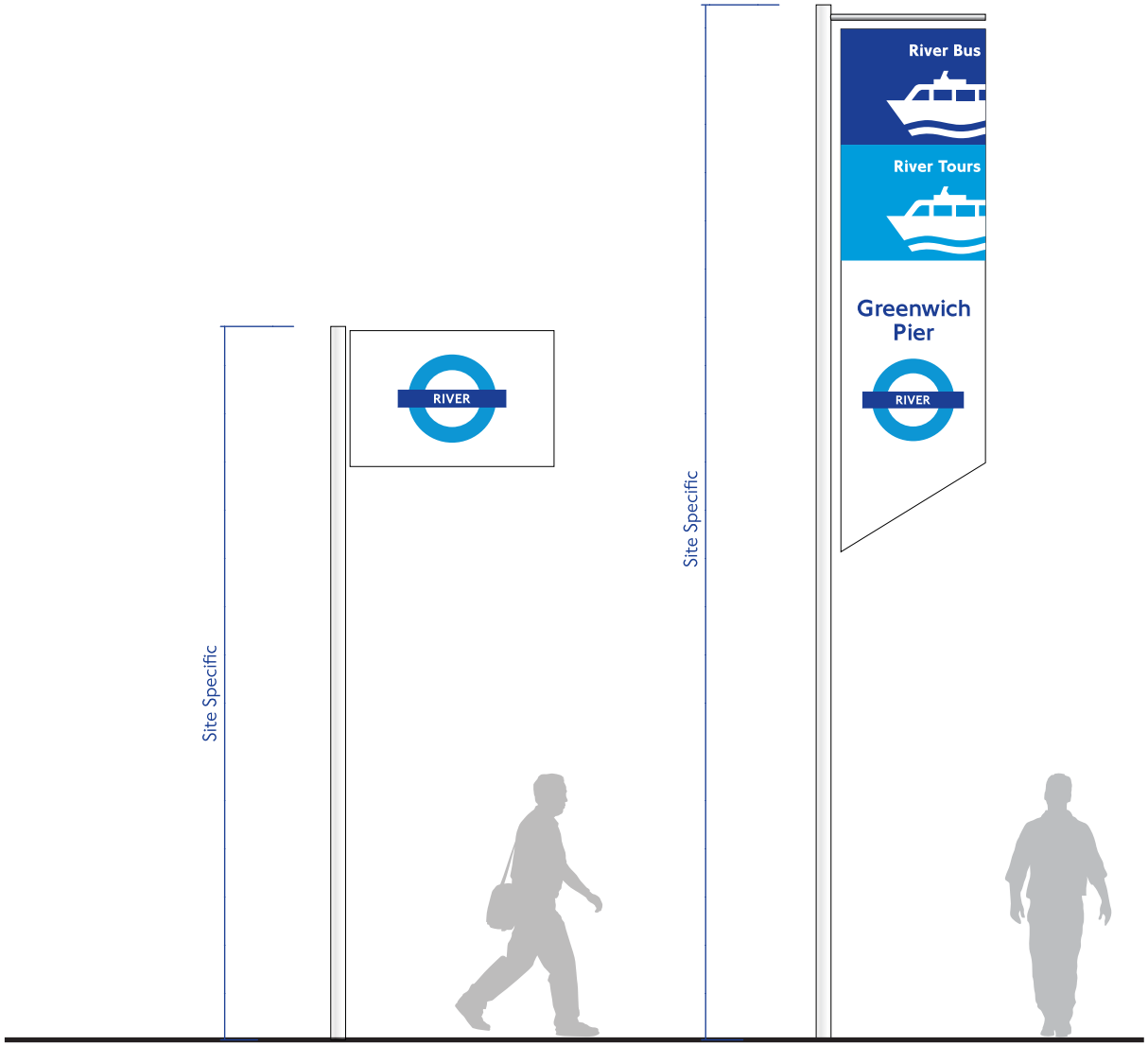
Side Elevation

6.5 Rivers identification signs and banners

Pier identification banners provide long distance identification for pedestrian traffic and watercraft.

The large format flag should be located on all piers unless specific local circumstances prevent its use, In which case the roundel landscape banner can be used.

More information on river services signing and graphic standards can be found in the ‘LRS Sign Standards manual’.



6.6 Pier canopy signage

Contents

Illuminated pier canopy signage is a powerful long distance identifier that raises the visual profile of the pier and provides immediate recognition as a part of London's broader travel network.

The position and location of pier canopy signage will be dependant on canopy design and structural suitability. Where possible, the canopy sign should be located centrally on the main pier pontoon or above the main boarding point area.

The location of the canopy sign must provide maximum long range visibility from surrounding areas to take into account foot traffic from adjacent streets, bridges and approaching water craft.

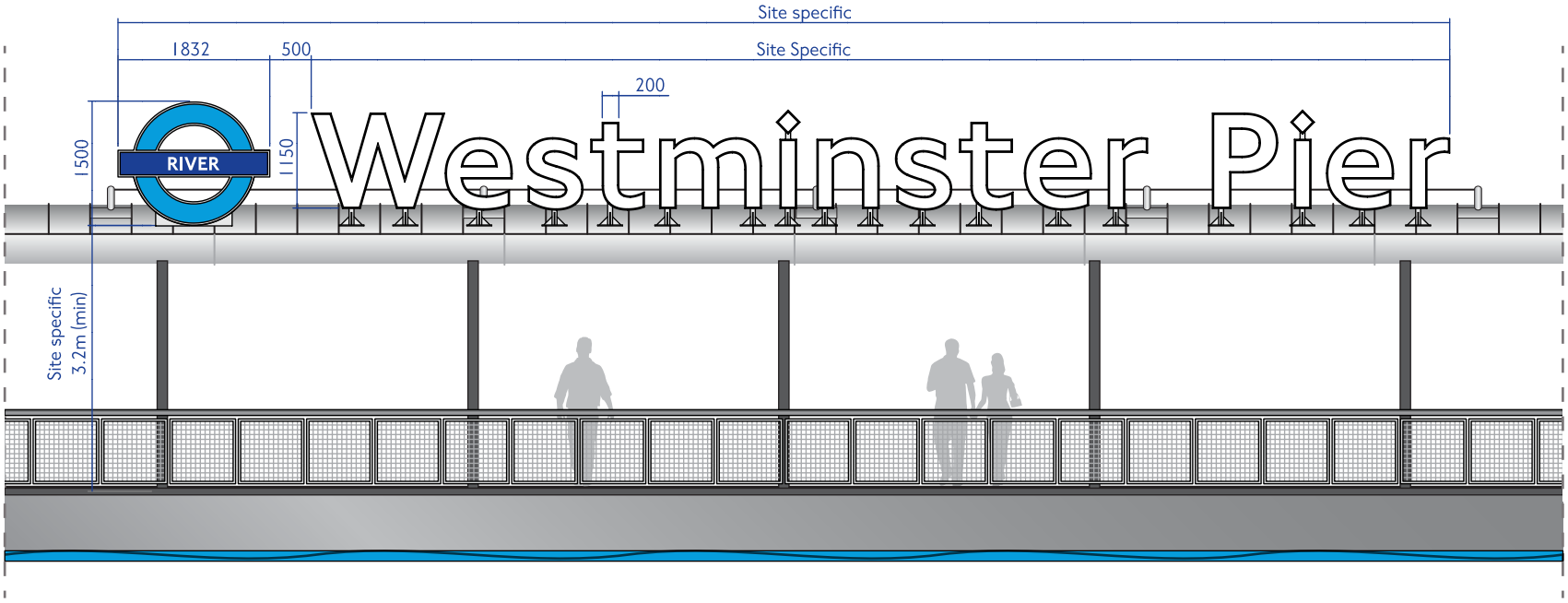
Each pier will require a specific structural survey to establish suitable fixing systems and locations for support framework.

Illuminated roundel and letters: The average light output at the sign surface should be 35 lux.

Local authority planning and approvals must be sought for all illuminated canopy signs.

Where appropriate, a restraint safety system should be installed prior to signage installation for safe access and future maintenance of the sinage and roof structure.

*NOTE: Westminster pier signage shown a example only



Front Elevational Detail

7 Pier signage

7 Pier signage

Contents

7.1 Introduction and principles

Introduction

The TfL transport network has a well grounded history of producing highly successful signage which clearly identifies and guides customers safely and efficiently.

The success of the Rivers signing system relies on the adoption and adaption of the broader TfL sign system to provide a coherent and consistent language that can connect the London rivers network to the broader London travel network.
Good signing is vital for TfL Rivers to project a consistent, modern and professional corporate image, and is essential to the smooth running of piers.

Careful consideration must be taken when surveying sites for wayfinding signage placement, pinch points on the customer journey must be correctly addressed and dealt with accordingly to adhere to the fundamental principles and signage products outlined in this guide.

General principles

It is essential that the signing displayed en route is clear and unambiguous, with an emphasis on areas of decision making. If unnecessary information is displayed, signs become more cluttered, harder to read on the move and cause confusion.

Signs should be orientated to face customers' movement wherever possible, and should be of consistent text size and adhere to the rivers signing format. At all changes in direction or decision points, signs should be clear and unobstructed on approach.

Having passed through the entrance arch, the customer will now follow a trail of signs to the correct boarding point. As with all journeys in the public space safety must be paramount, none more so than marine environments. Correct and concise warning and hazard signage must be located in key visible areas without becoming too numerous and aggressive. If not considered carefully the placement of safety, warning and hazard signage can induce anxiety and discomfort, negatively affecting the customer experience.

It is important to remove all extraneous signage elements and careful consideration must be given to de clutter the visual signage landscape.

Piers on London's river system are diverse in layout and architecture, and as such, this manual cannot contain signing solutions for every pier, jetty or landing. It will, however, establish the set principles to enable effective and consistent solutions to be applied across the network.

The following illustrations deal with the key signage and wayfinding elements at crucial decision making points and highlight hazardous or dangerous aspects of the journey from pier entry to boarding point.

*Sign types and artwork indicative only refer to specific site survey documentation for sign type specifications.

Colour samples and references can be found in the separate 'London Underground colour standards for identity and information' booklet. A4-size NCS colour swatches can be purchased from:

Edgebrite Limited
60b High Street
Bridgnorth
Shropshire WV16 4DX
Telephone 01746 767500
or
Langford & Hill
38-40 Warwick Street
London W1R 6LS
Telephone 020 7437 9945

7.2.1 General wayfinging principles

The broader wayfinding strategy can be broken down into eight key areas for careful consideration.

1. Signs on arrival

These signs identify the pier and describe its location in the broader rivers and local context. This first point of contact will provide key route and operator information and ultimately inform onward journey planning.

2. Ticketing and queuing

Ticketing is generally handled off the pier and as such ticket purchase must be facilitated at or before entry onto the pier or landing. Ticket booths and kiosks must be clearly visible to pedestrian traffic and located within close proximity to the pier entrance. Clear and consistent operator signage will provide easy identification of available services and aid in the decision making process. Consideration must given to periods of high demand and as such efficient queuing systems must be in place.

3. Entry & pier directional signage

The journey from the entry archway to the boarding point must be clear and concise. Customers must first and foremost be directed toward boarding points, only at key directional decision making points should we introduce specific route and boarding point information. The flow of passengers entering the pier must be, as is reasonable, separate from those passengers exiting the pier.

4. Tourist & route information signs

At key points along the customers journey, clear route information must be displayed. This helps to reinforce route selection and enhance customer confidence, reducing potential for undue panic and attention of floor staff. It is also important to link back to the broader London transport network by providing information about local transport options and provide tourists with targeted information about the opportunities that exist within the broader rivers network.

This information must be available at carefully considered locations along the customer journey, this information must be away from areas of high foot traffic and areas that can cause congestion, particularly to passengers exiting the piers. Waiting rooms, main pontoon queuing area and areas with high dwell times are ideal as they provide maximum exposure and allow free unobstructed movement of foot traffic.

5. Boarding point signs

It is essential passengers are aware of boarding point locations. These areas must be clearly signed and allow for unobstructed views from passenger queues and customers entering from adjoining brows.

Pier identification signs will be located at boarding point locations or at regular spacings on the water-side railings, these should be located to provide high visibility to approaching watercraft. These signs, in combination with the main pier identification signs help to provide positive route reinforcement for disembarking passengers.

6. Safety, warning & hazard signs

The pier is a constantly moving environment and that in itself presents a series of inherent risks to the customer, clear and concise warning and hazard signage must be located in key visible areas. If not considered carefully the placement and frequency of safety, warning and hazard signage can negatively impact the customer experience. This information must be visible but not intrusive throughout the customer journey, from pier brow to boarding point.

7. Exit signage

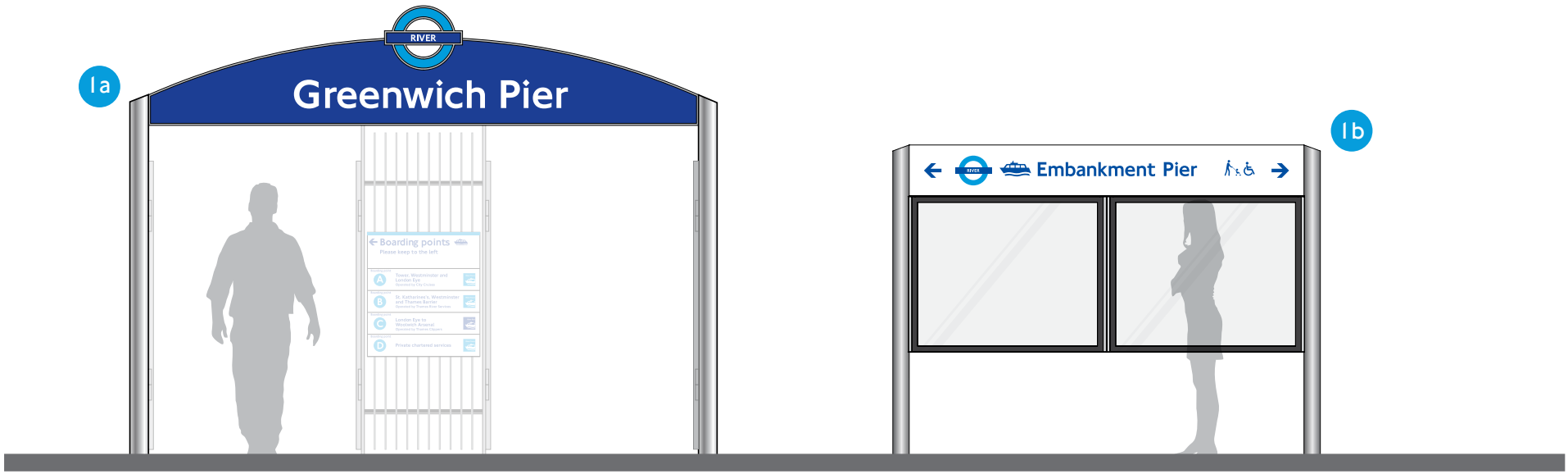
The exit route must be clearly signed at all decision making points along the journey. Ideally the exit route should be planned to avoid passenger flows entering onto the pier. Where there are long walkway routes, repeater signs should be used at frequent intervals to reassure customers that they are going in the right direction. Exit routes must be clear at all times and signage must help reinforce the idea of ‘keeping left’ as is evident on the rest of TfL and underground network.

‘Way out’ signs located on the pier and main pontoons should be unambiguous and clear, the use of directional information in combination with way out signage is discouraged in these circumstances as it can create confusion on exiting the pier. Dedicated directional wayfinding signage on embankment exit is recommended.

8. Contingency signage

An allocation should be made for mobile and temporary information signs to be used in the event of an unforeseen incident or route closure to inform passengers in a timely manner as not to create congestion or block passenger flow on or off the pier.

7.2.2 Sign Family - Signs on Arrival



1a Entrance archway

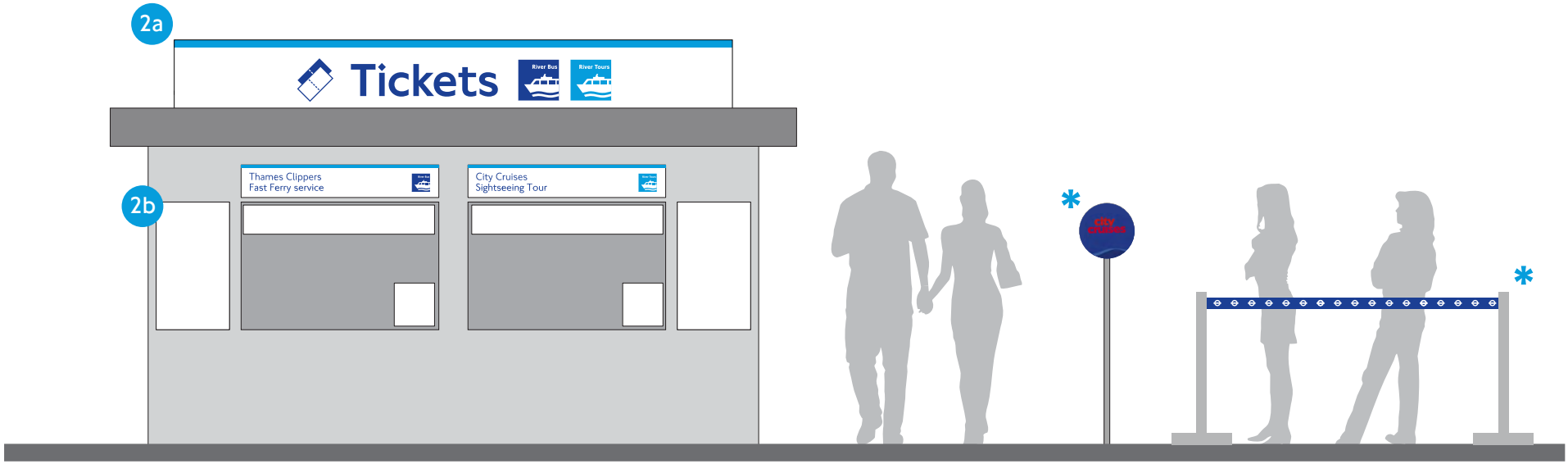
Sign panel containing pier name with central illuminated roundel. Provides a clear visual indicator of pier entrance.

1b Main entrance publicity display board

Located in a prominent position beside the entrance to the pier. Features pier name, service information location information and operator branding.

* Refer to typical route plan and typical layout elevations that follow.

7.2.3 Sign Family - Ticketing and Queuing



2a **Main header signage**
Sign to clearly indicate location of ticket office.

2b **Operator branding & secondary branding elements**
Signs advertising independant operator rivers services. For more information on ticket booth signage see chapter 5.2

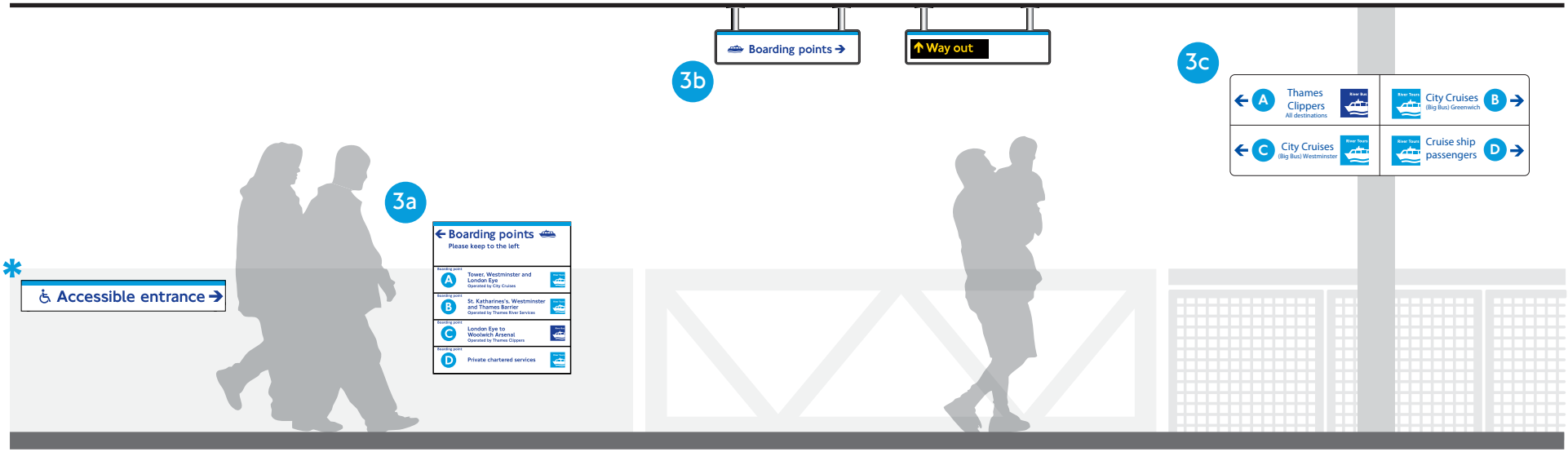
* **Tensabarriers**
Tensabarriers used for flexible control of queuing. See chapter 5.21 for more detail.

Free standing 'Lollipop' sign
Free standing lollipop signs can be used at queuing and ticketing points for service identification and promotion. See chapter 7.6 for more detail.

* Refer to typical route plan and typical layout elevations that follow.

7.2.4 Sign Family - Entry and Pier Directional Signage

Contents



3a Boarding directional sign
Positioned in prominent locations where customers need to make decisions about which direction to take.

3b Small directional signs
Positioned in a clear line of sight, mounted on ceilings, floors or walls. Size tailored to suit size of message.

3c Main directional/boarding point sign
Positioned at the decision point at entry point onto the main pontoon.

* Refer to typical route plan and typical layout elevations that follow.

* **Accessible entrance sign**
Positioned in a suitable location at the entry points on or before the brows.

7.2.5 Sign Family - Tourist and Route Information Signs

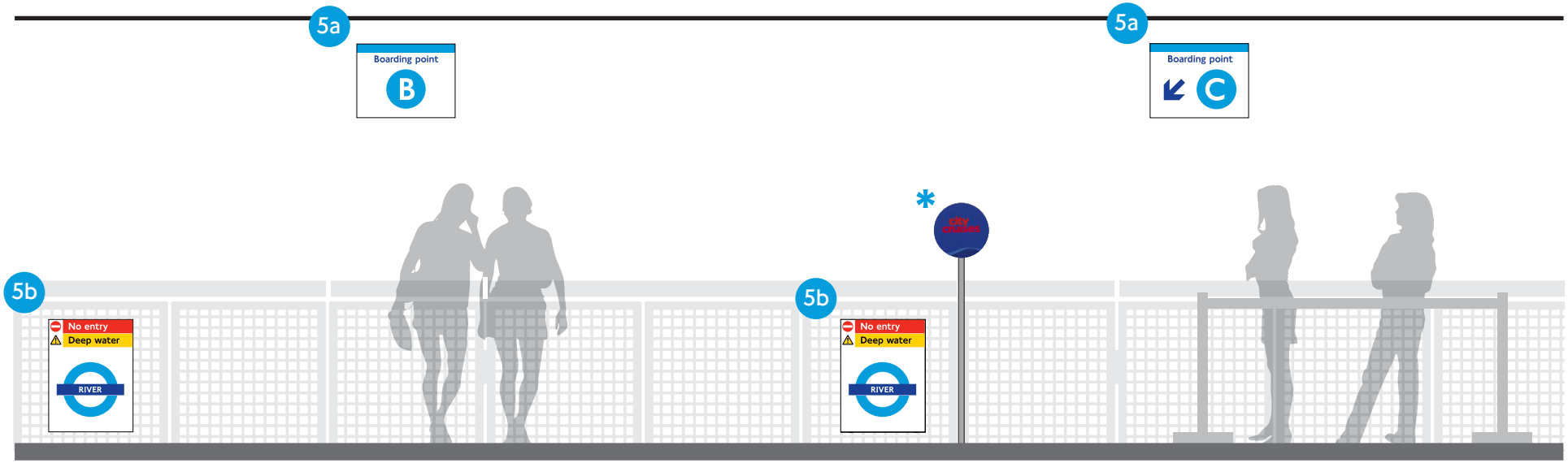
4a DR QR DR Information Board
Large information displays, units can be free standing post mount or affixed to a suitable structure on pier.

4b QR Information Board
Single QR information displays, units can be free standing post mount or affixed to a suitable structure on pier.

4c DR Information Board
Single DR information displays, units can be free standing post mount or affixed to a suitable structure on pier.

* Refer to typical route plan and typical layout elevations that follow.

7.2.6 Sign Family - Boarding Point Signs



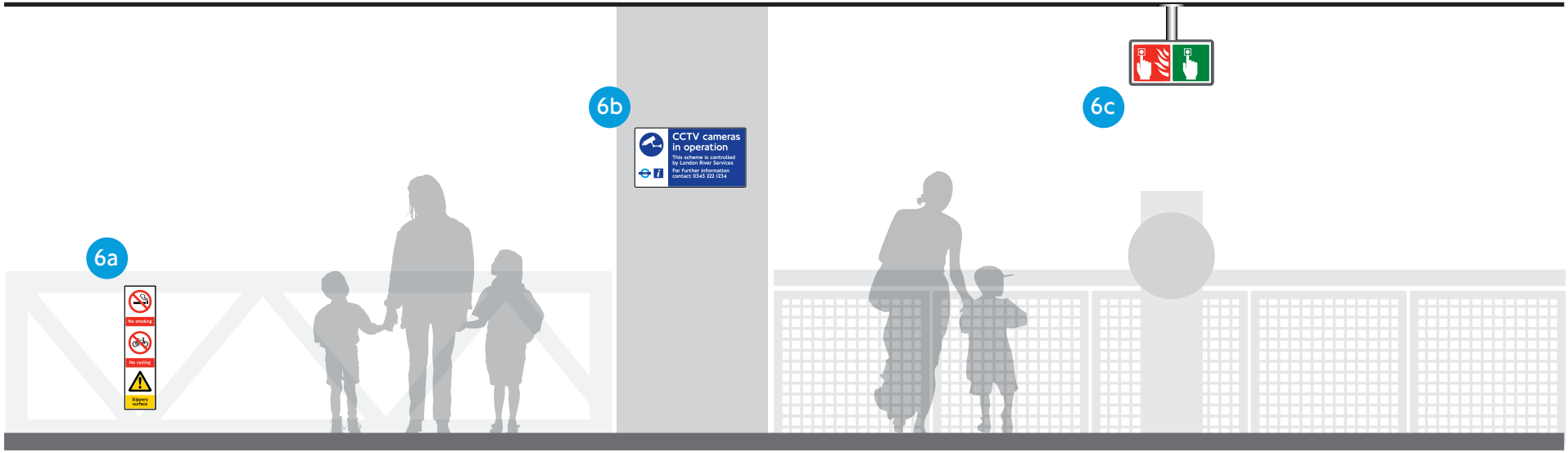
5a **Boarding Point Sign**
Located adjacent to boarding gates. Mounted on walls/ceilings.

5b **Pier Name Sign**
Displayed at regular intervals along a pier front. Double sided sign with inside face displaying warning message.

* **Free standing 'Lollipop' sign**
Free standing lollipop signs can be used at queuing and/or boarding points for service identification. See chapter 7.6 for more detail.

* Refer to typical route plan and typical layout elevations that follow.

7.2.7 Sign Family - Safety, Warning and Hazard Signage



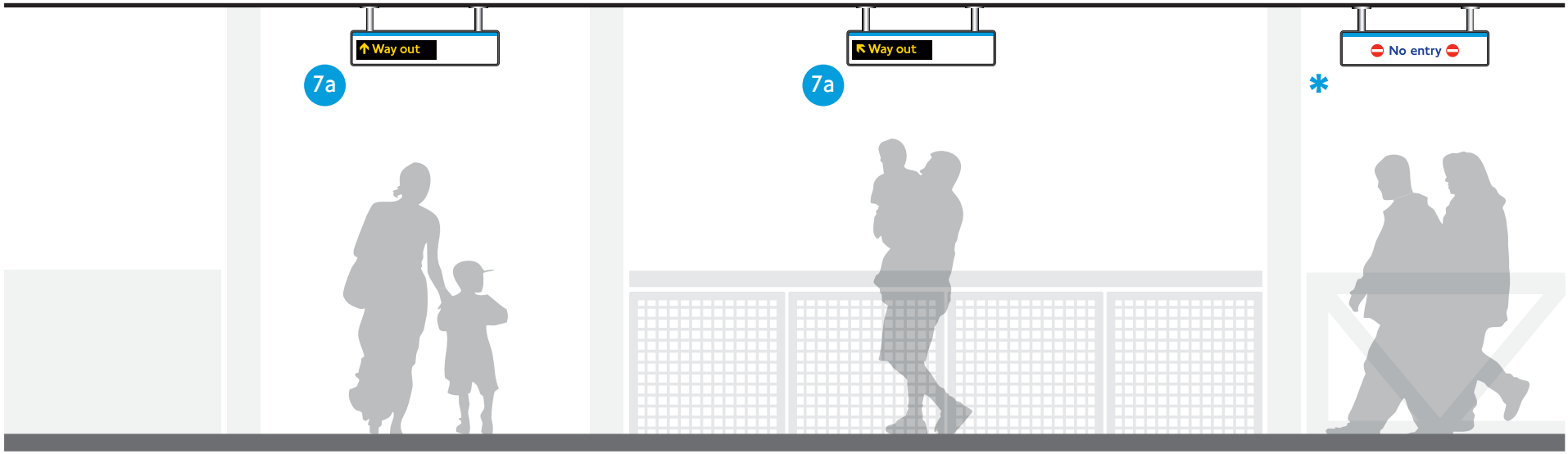
6a Safety warning and hazard signage
Located in key visible areas throughout the customer journey

6b CCTV signs
Positioned in a clear line of sight, on brow at the entrance to the pier and a repeater sign on main pontoon. Size tailored to suit size of message.

6c Fire alarm & help points
Ceiling mounted directly above the help point in all instances. Positioned in a clear line of sight

✱ Refer to typical route plan and typical layout elevations that follow.

7.2.8 Sign Family - Exit Signage

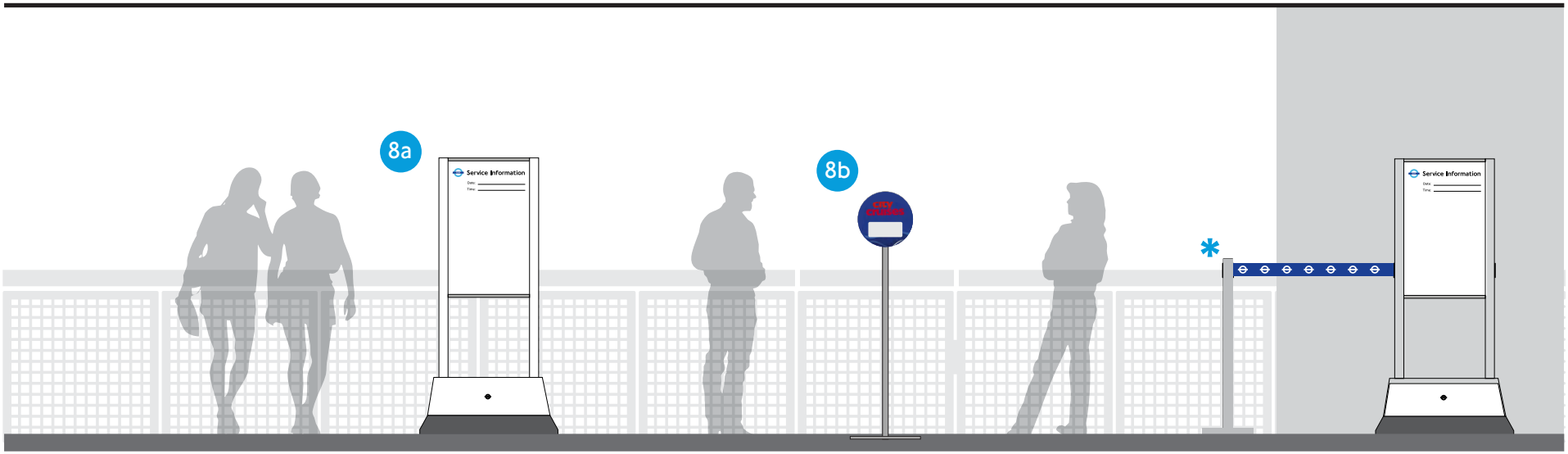


7a **'Way Out' exit signage**
Directional information signs positioned along the exit route. Repeater signs should be used frequently to assure passengers of correct exit route.

✱ Refer to typical route plan and typical layout elevations that follow.

✱ **No entry signs**
No entry signs should be displayed on the reverse side of all suitable hanging signs.

7.2.9 Sign Family - Contingency Signage



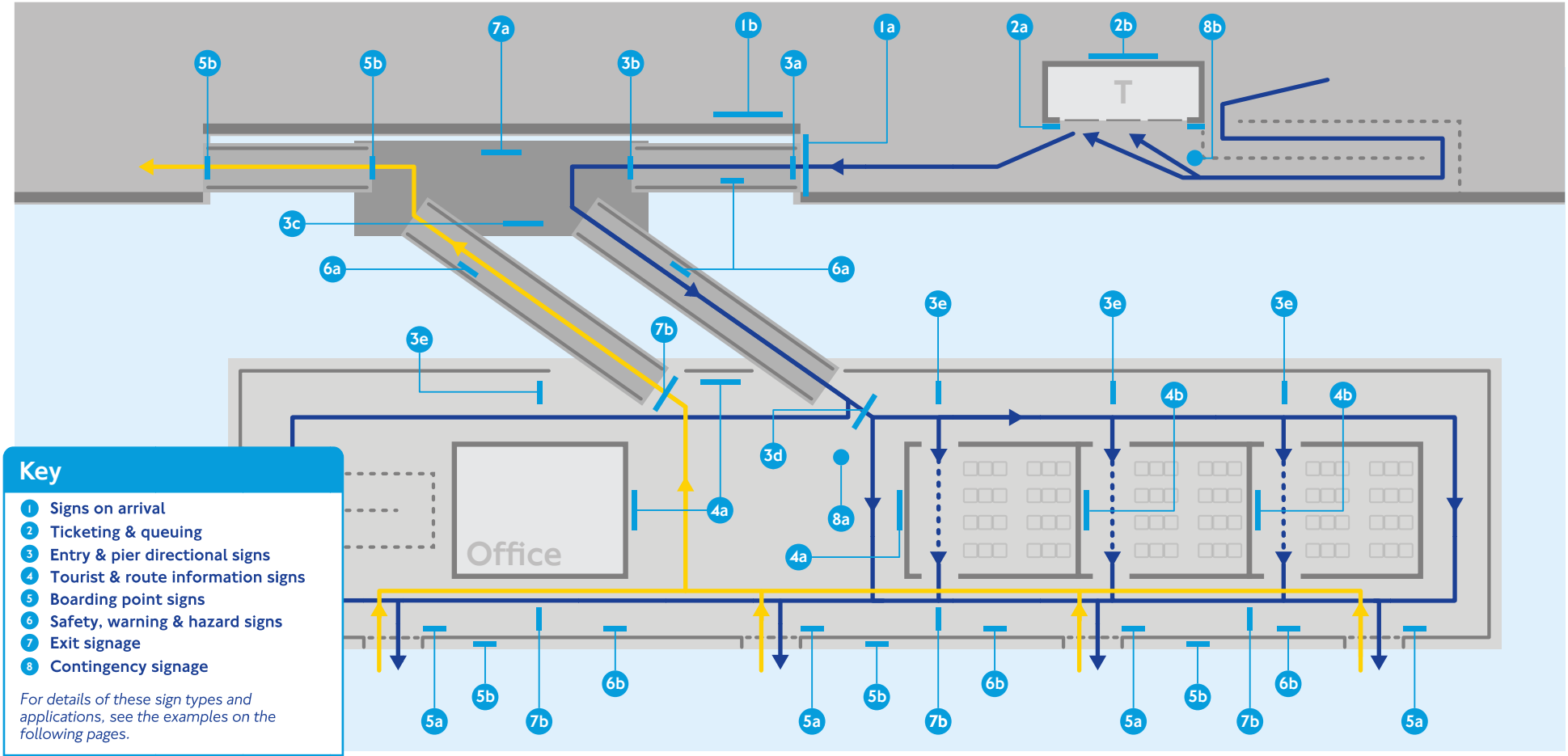
8a Main entrance publicity display board
Double sided mobile information unit positioned wherever required.

8b Temporary operator Sign
Stand alone sign which can be used when necessary. Displays specific operator information.

*** Tensabarriers**
Free standing lollipop signs can be used at queuing and/or boarding points for service identification. See chapter 7.10 for more detail.

* Refer to typical route plan and typical layout elevations that follow.

7.2.10 Typical route plan - large format



Key

1. Signs on arrival
2. Ticketing & queuing
3. Entry & pier directional signs
4. Tourist & route information signs
5. Boarding point signs
6. Safety, warning & hazard signs
7. Exit signage
8. Contingency signage

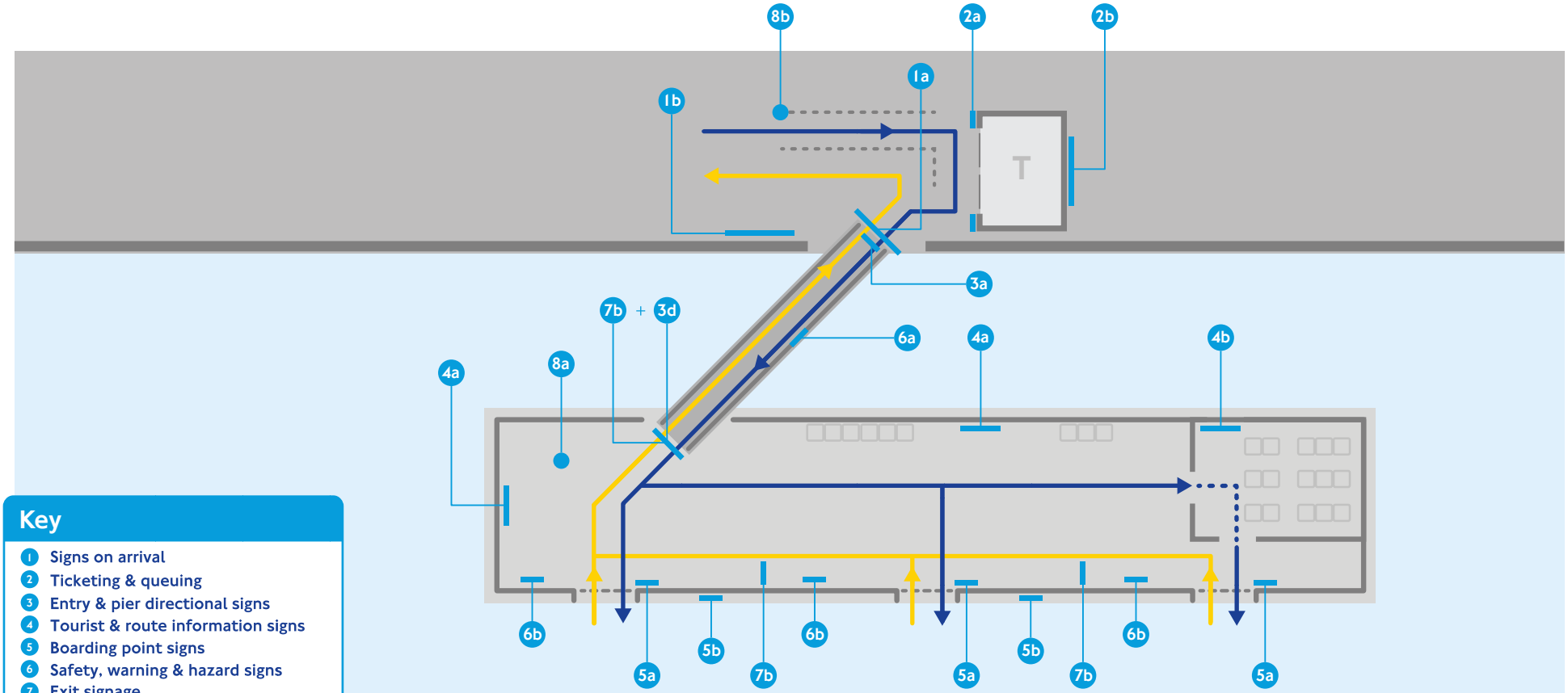
For details of these sign types and applications, see the examples on the following pages.

Entry route to boarding points

Exit route from craft

2b *The single number refers to a group of signs which have the same function, as described in the generic wayfinding principles. The letter refers to a specific sign type.*

7.2.11 Typical route plan - medium format



Key

1. Signs on arrival
2. Ticketing & queuing
3. Entry & pier directional signs
4. Tourist & route information signs
5. Boarding point signs
6. Safety, warning & hazard signs
7. Exit signage
8. Contingency signage

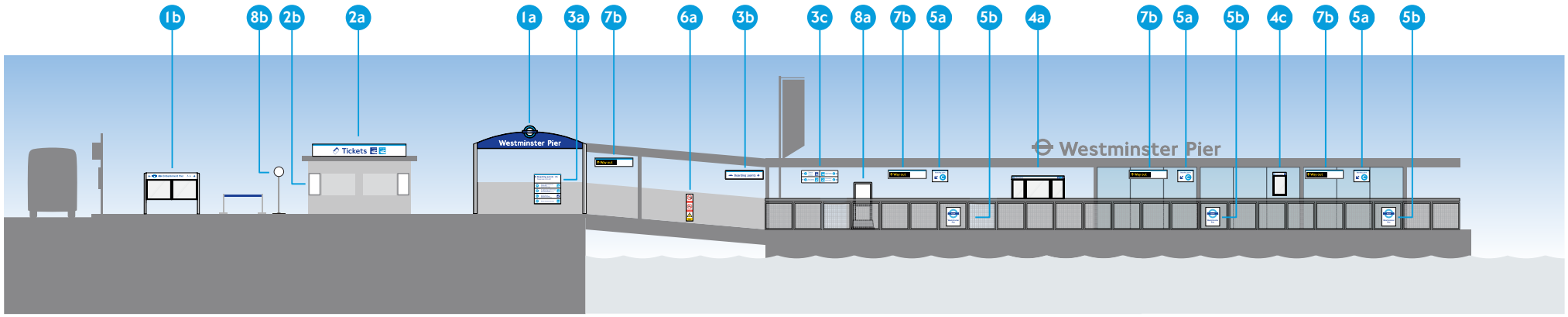
For details of these sign types and applications, see the examples on the following pages.

Entry route to boarding points

Exit route from craft

2b *The single number refers to a group of signs which have the same function, as described in the generic wayfinding principles. The letter refers to a specific sign type.*

7.2.13 Typical layout elevation - large format



Signs on arrival ▶ Ticketing & queuing ▶ Entry & pier directional signs ▶ Tourist & route information ▶ Boarding point signage ▶ Exit signage

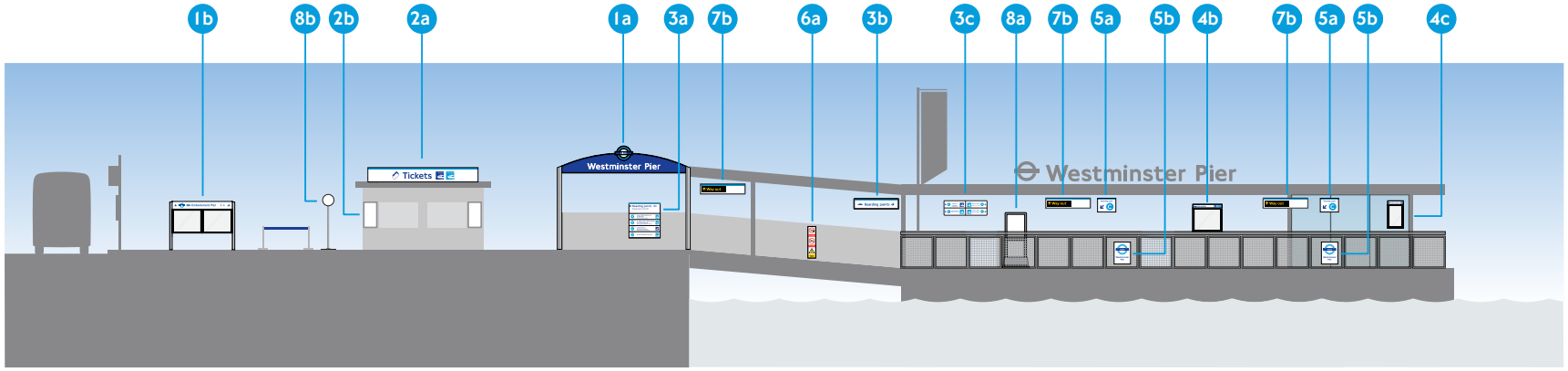
Key

1. **Signs on arrival**
2. **Ticketing & queuing**
3. **Entry & pier directional signs**
4. **Tourist & route information signs**
5. **Boarding point signs**
6. **Safety, warning & hazard signs**
7. **Exit signage**
8. **Contingency signage**

For details of these sign types and applications, see the examples on the following pages.

2b *The single number refers to a group of signs which have the same function, as described in the generic wayfinding principles. The letter refers to a specific sign type.*

7.2.14 Typical layout elevation - Medium format



Signs on arrival ▶ Ticketing & queuing ▶ Entry & pier directional signs ▶ Tourist & route information ▶ Boarding point signage ▶ Exit signage

Key

1. **Signs on arrival**
2. **Ticketing & queuing**
3. **Entry & pier directional signs**
4. **Tourist & route information signs**
5. **Boarding point signs**
6. **Safety, warning & hazard signs**
7. **Exit signage**
8. **Contingency signage**

For details of these sign types and applications, see the examples on the following pages.

2b *The single number refers to a group of signs which have the same function, as described in the generic wayfinding principles. The letter refers to a specific sign type.*

7.3 Entrance archways

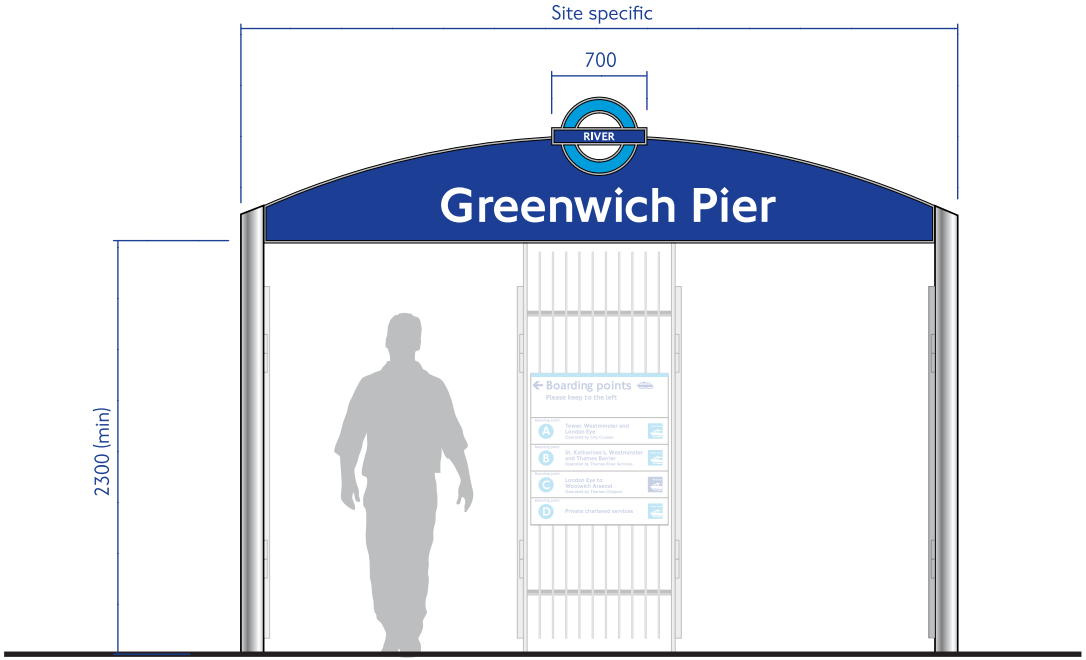
Contents

Entrance archways are a critical gateway element providing a clear branded visual indicator of pier location and pier entrance. Archway signs should be used to provide an important, and unifying, element of the rivers look and feel.

As standard, the rivers entrance archways comprise a corporate blue sign panel containing pier name with an integrated, centrally located, illuminated Rivers roundel. Extraneous operator, information or boarding point signage should not be attached at this point.

The entrance archway should only be used at points of entry.

In situations where sensitive local architectural or heritage features exist, structural post colour and design can be adapted to suit local architectural elements.



Front Elevation

7.4 Publicity display

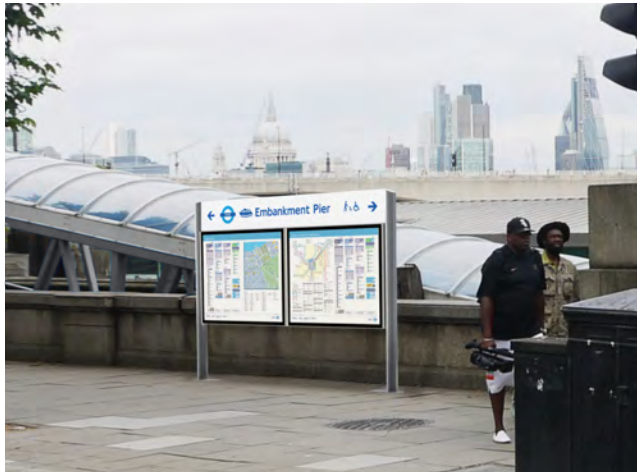
The entrance sign is to be located in a prominent position beside the entrance to the pier.

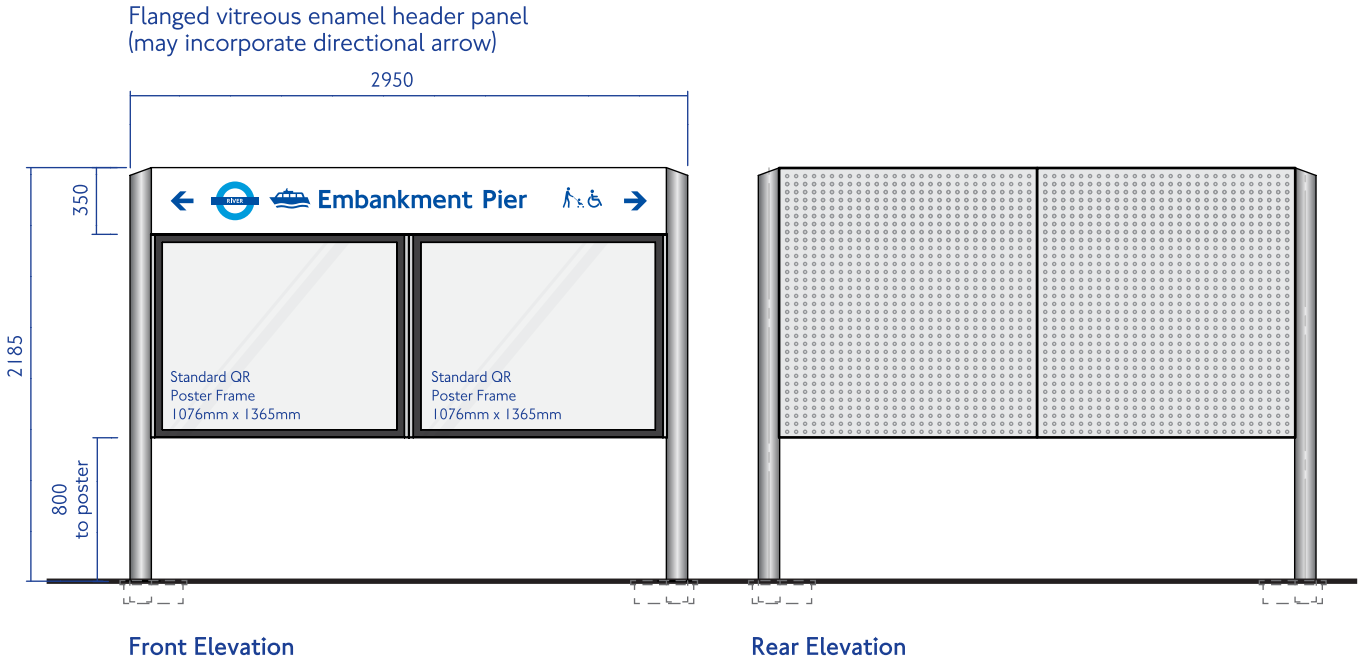
Main entrance publicity display boards display clearly the pier name, primary location information, service information and operator branding. The poster unit provides a focused and cost-effective first contact point for travel information. Paper posters are contained in a clean, simple frame, which can be easily replaced. The units can be manufactured a number of modular lengths to suit the quantity of poster frames required.

As a standard TfL unit, standard component compatibility ensures low maintenance. Installation is straightforward and the site requires little repair after removal.

Where possible publicity displays should be freestanding and mounted into the pavement using flush mounted retention sockets.

More information on river services signing and graphic standards can be found in the 'LRS Sign manual'.





7.5 Information & timetable displays

Timetable information is vital to journey planning and promotes the feeling of a well-managed service.

Depending on location specific requirements, information boards should be used in three standard configurations where possible. See fig 15.

These standard-sized, glass-fronted individual poster frames provide a secure unit for TfL travel information and publicity. The frames have modern, clean lines and no protrusions or sharp corners.
The majority of frames are made to TfL's standard Double Royal and Quad Royal sizes. Other standard and special sizes are available.

In sensitive heritage areas black posts can be used.

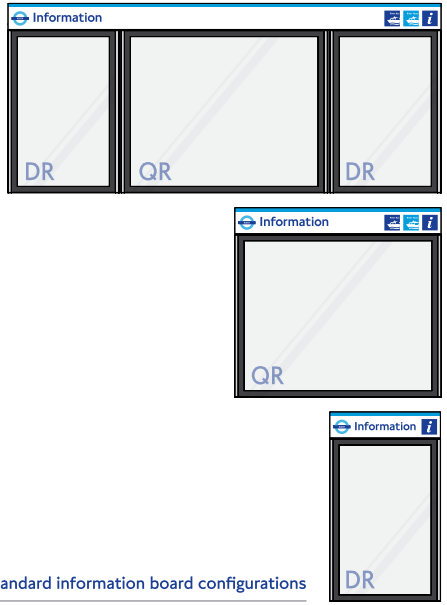
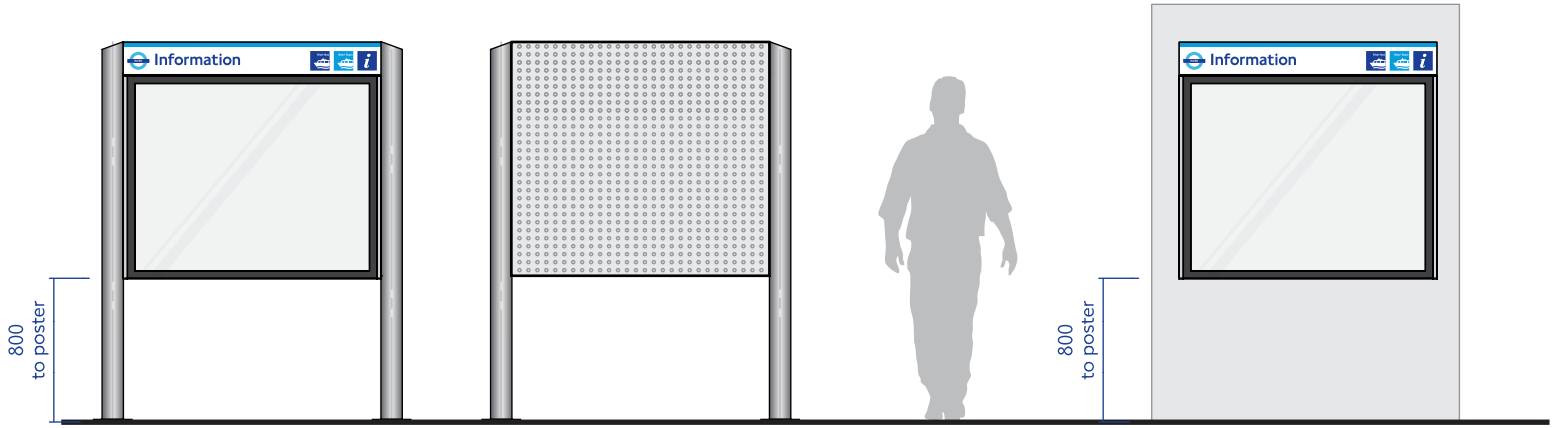


Figure 15. standard information board configurations



Front Elevation | Rear Elevation | Front Elevation - Wall mounted

7.6.1 Directional information signs

Contents

Directional signage provides customers with information on station amenities and local features in both written and pictogram form. Its appearance is compliant with TfL station sign guidelines, and provides the customer with consistency and understanding. Colours must comply with TfL guidelines and the size of the sign and its graphics should correspond to the maximum viewing distance required by the specific site conditions.

Hanging & wall mounted signs

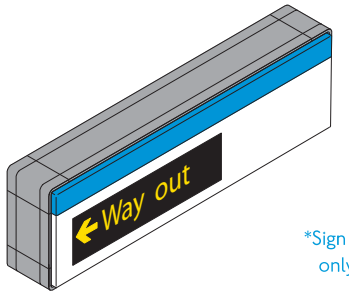
Signs should be positioned in a clear line of sight and may be ceiling, wall or floor-mounted (See also exit signs).

The aluminium frame and vitreous enamel sign panels are self-cleaning and require little maintenance. Site work is minimal and spare parts are readily available.
This is a preferred corporate solution, but variation within TfL guidelines is permitted depending on environmental issues.

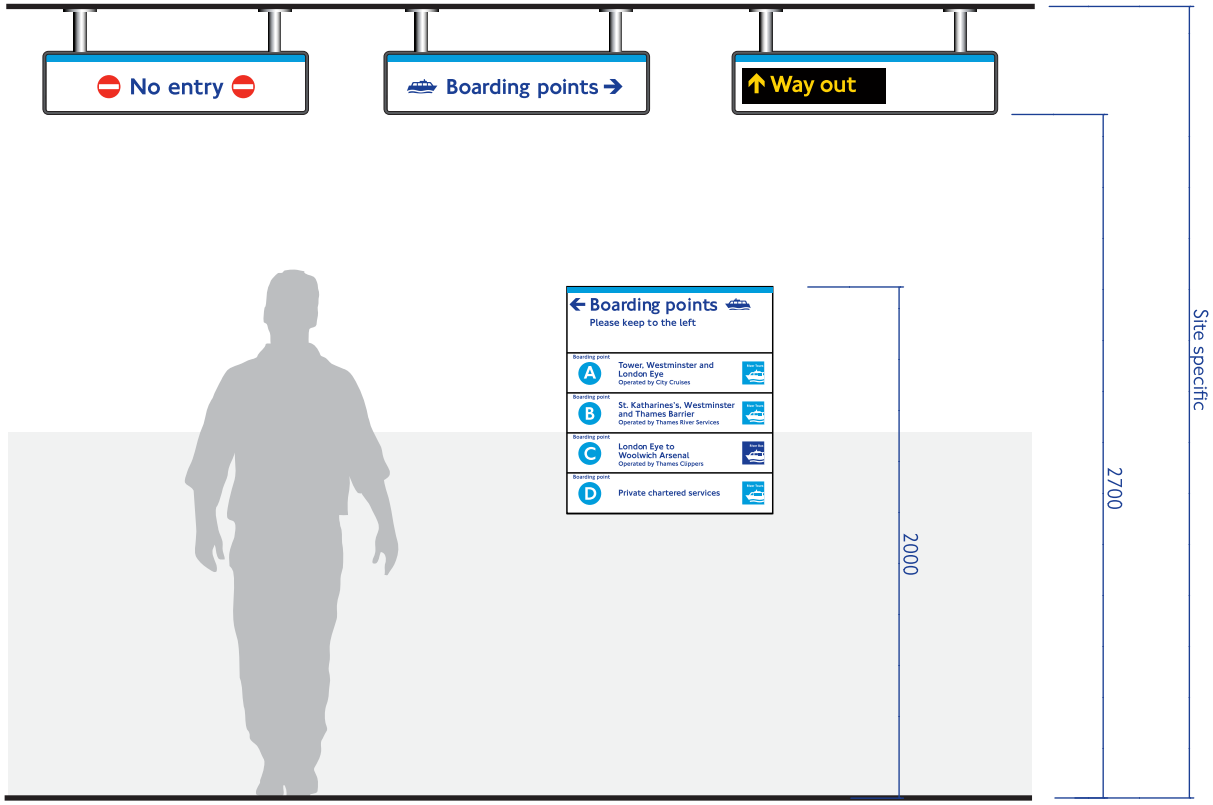
In areas where signs are suspended from ceilings, they should be fitted at an optimum viewing height of 2.7m to the underside. If ceilings are at a very high level, extended fixings or alternative mountings should be sought to avoid signs being lost in the ceiling void. Where signs are fitted tight to suspended
ceilings, they should not span lighting runs, where reflected light may render the signing illegible, and cause lighting maintenance problems.
For wall-mounted signing, an optimum datum level of 2m from floor level to the top edge of the sign should be used, which should also be adhered to for supplementary signs and poster frames. This will ensure that the sign message, or the sign header, is clearly visible even in a crowded area.

More information on river services signing and graphic standards can be found in the 'LRS Sign manual'.

For more information on LUL signage products and standards please refer to: Guide to London Underground signing for station improvement projects 2004



*Sign types and artwork indicative only refer to specific site survey documentation for sign type specifications.



Front Elevation

7.6.2 Directional information signs - on exit

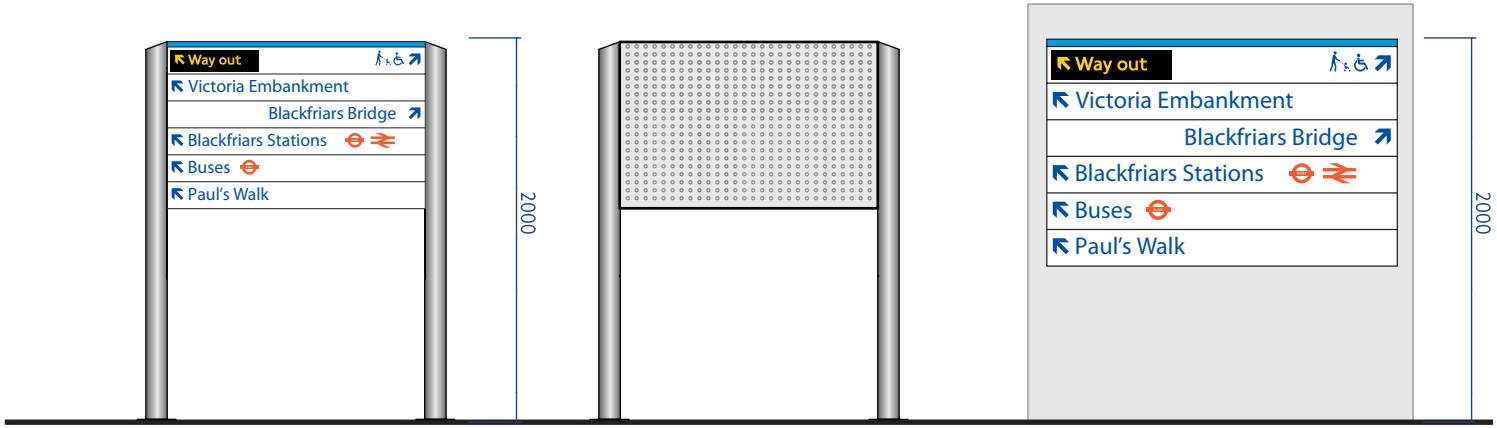
Contents

Where appropriate directional information signs should be used at exit points to provide clear directional information to customers as they exit the pier.

Where the opportunity exists, directional information signage can be repeated on the rear surface of information boards if located within the clear lines of site of passengers exiting the pier.

Rear panels, if accessible should be treated with anti graffiti panels as standard.

More information on river services signing and graphic standards can be found in the 'LRS Sign manual'.



Front Elevation

Rear Elevation
Showing anti graffiti treatment

Front Elevation - Wall mounted

7.7 Operator signs

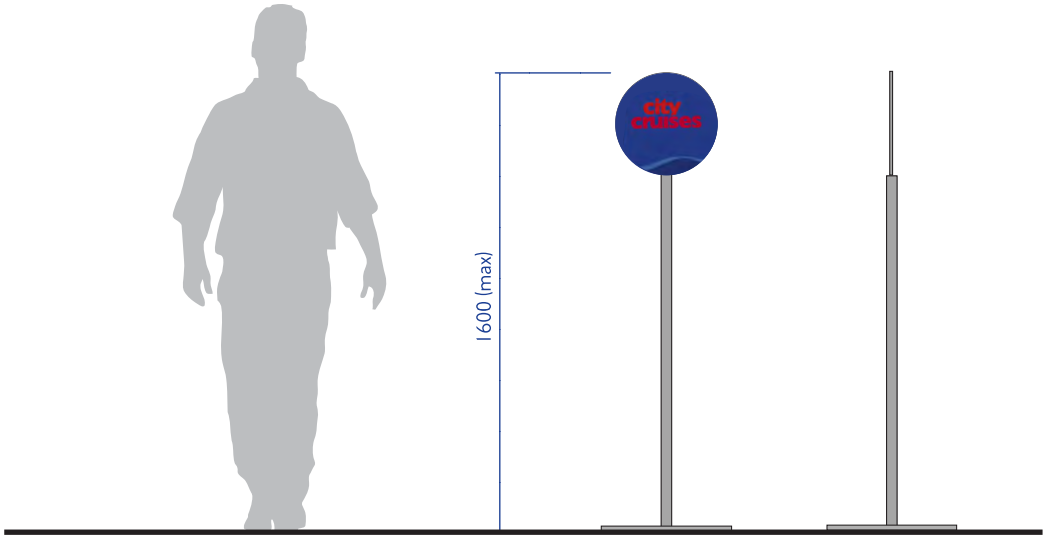
London's pier network has traditionally hosted a varying number of independent operators. Together with TfL River, this branding must work to support and promote in a complementary way but not take precedence over one another.

As a number of London piers have multiple operators, operator information should, where possible, be displayed in controlled locations on ticket kiosks, queuing areas and boarding points.

Operators should have dedicated space at the ticket kiosk for fare and service promotion, details on the application and zoning of this signage can be found on chapter 5.1 and 5.2.

The use of temporary 'lollipop signs' can be used during busy times to direct passengers to the correct queuing areas and/or boarding points. At certain locations the use of free standing operator branded kiosk's can be used to support operator service staff.

Route information and promotional signage can be displayed on the pier, but, where possible should be displayed within standard 'Information & timetable display boards' or standard TfL poster frames.



7.8 Boarding point signs

Boarding point signage provides a clear indication of the boarding points from pier to boat. It is important to be clear and concise with all boarding point indications as confusion and passenger backlogs can be hazardous at these points on the waters edge.

Boarding points signs should be located directly adjacent to boarding gates, indication should be given at distance with ceiling or wall mounted signs placed above head height and within clear lines of sight from the main deck. Waters edge boarding point indication, signs on the waters edge panelling, provides clear route reinforcement at a critical point on the customer journey.

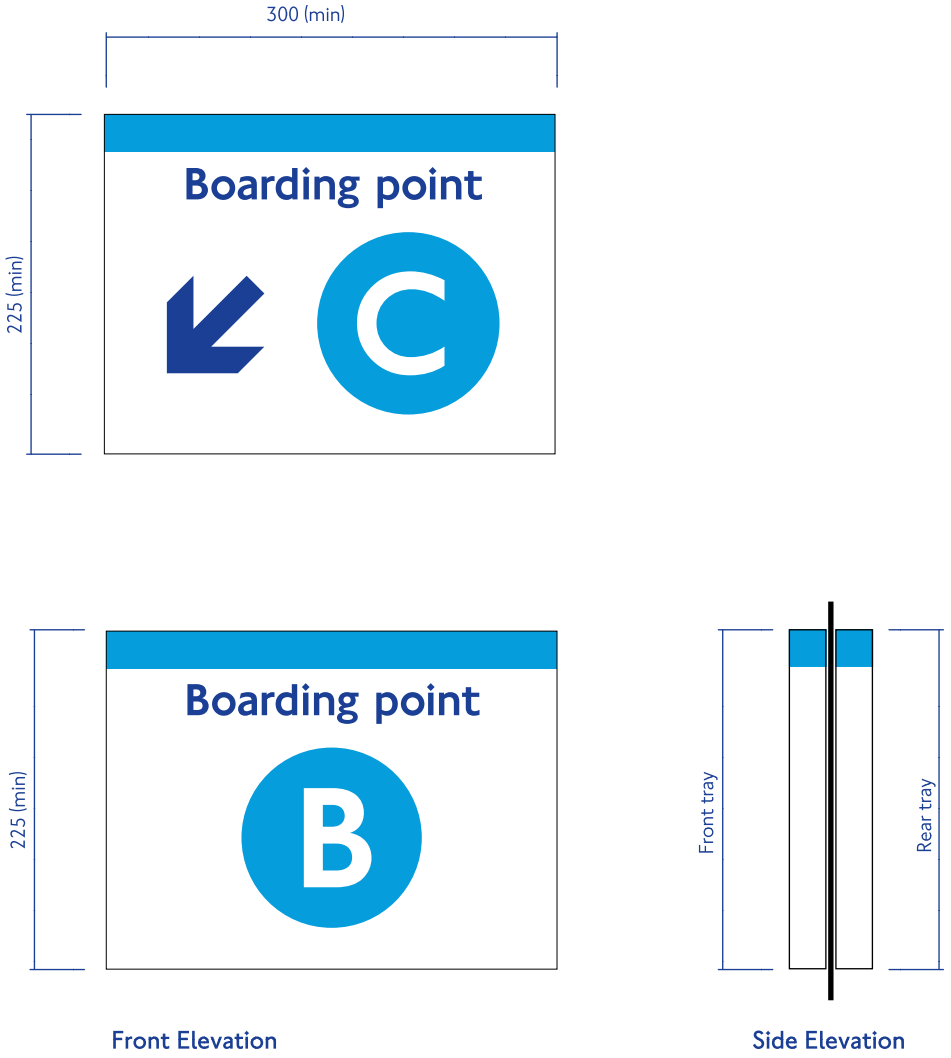
It is desirable for boarding point indication to be classified in an A,B,C format.

Boarding points should not contain extraneous signage that may cause distraction or confusion, such as operator branded signage or temporary service signage.

Where appropriate, directional arrows may be used to direct passengers.

Wall mounted signs to be fully flanged aluminium sign trays to adhere to TfL signage deign standards.

More information on river services signing and graphic standards can be found in the 'LRS Sign Standards manual'.



Front Elevation

Side Elevation

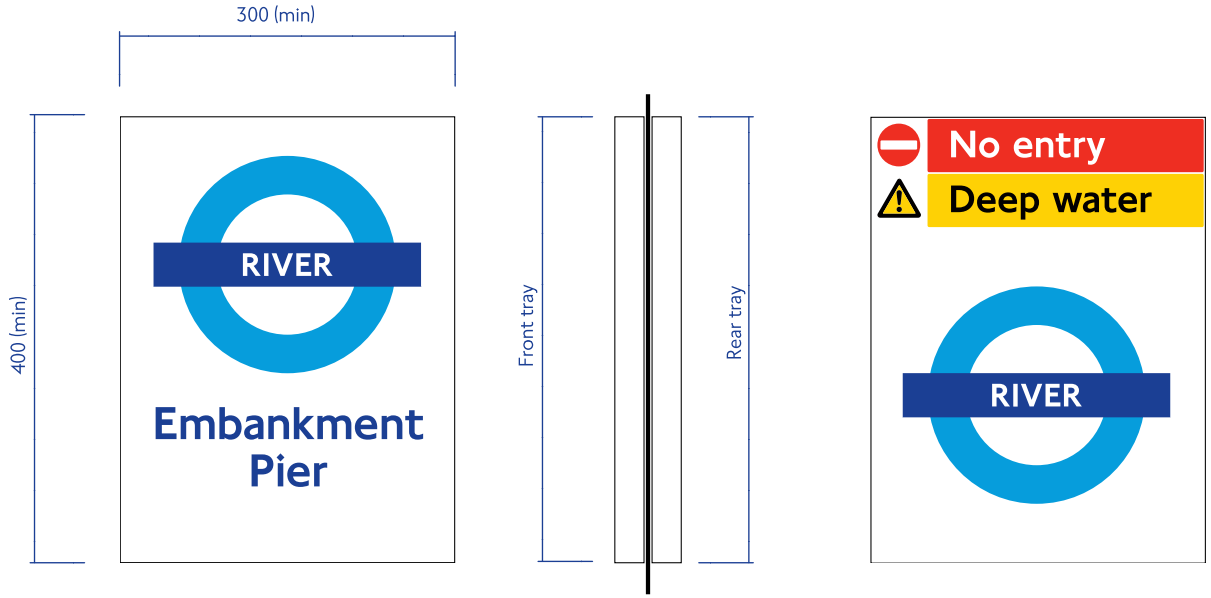
7.9 Pier name signs - waters edge

Contents

Pier name signs help inform those disembarking from a boat as to the name of pier they are approaching. They are to be displayed at regular intervals along a pier front so that from any position from within the boat itself, the pier name is clearly apparent.

Wall and rail mounted signs to be fully flanged aluminium sign trays to adhere to TfL signage deign standards.

More information on river services signing and graphic standards can be found in the 'LRS Sign manual'.



Front Elevation

Side Elevation

Rear Elevation

7.10 Safety, warning & hazard signs

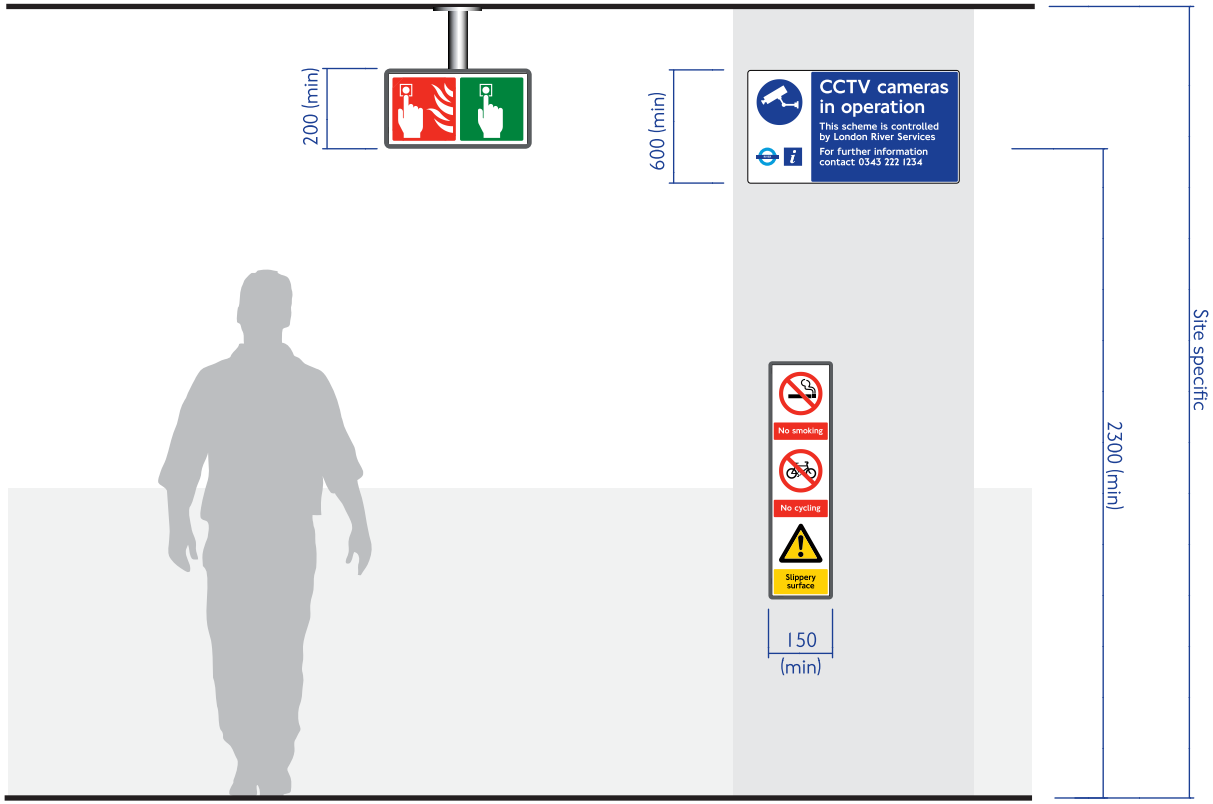
Clear and concise warning and hazard signage must be located in key visible areas. If not considered carefully the placement and frequency of safety, warning and hazard signage can negatively impact the customer experience. This information must be visible but not intrusive throughout the customer journey, from pier brow to boarding point.

Safety signs fall broadly into two categories - Signs marking emergency facilities to be viewed from distance, and safety notices associated with equipment, locations and regulations. Signs marking facilities such as emergency exits, fire equipment points, or help points are of a similar scale to directional signs and subject to the same consideration in terms if visibility and legibility. Safety notices are generally flat plate signs, from a set range of safety messages fitted to walls or doors through out the entire station complex. All safety signs must be fully compliant with LUL Chief Engineers Standards.

Wall mounted signs to be fully flanged aluminium sign trays to adhere to TfL signage deign standards.

Hanging sign boxes constructed from aluminium to adhere TfL signage standards, sign faces to be vitreous enamel or vinyl covered painted aluminium where appropriate.

For more information on London Underground signage standards please refer to: London Underground signs manual. Issue 4, Oct 2002



Front Elevation

7.11 Contingency signs

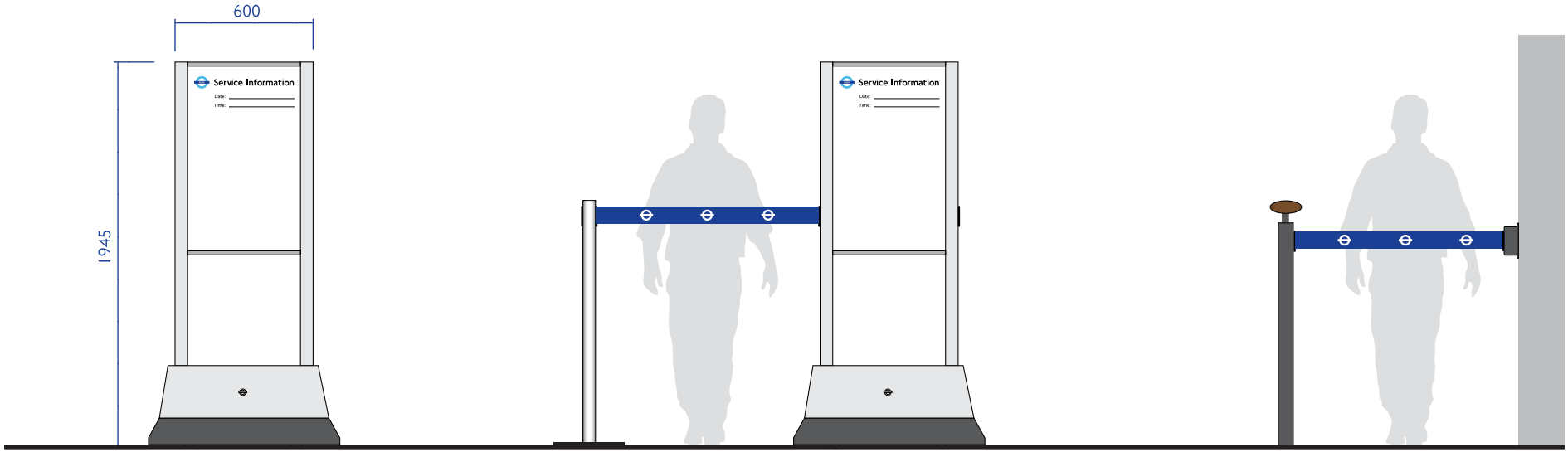
Contingency signage is an important part of the general pier signage family. It offers an easily adaptable and movable platform to display important information in a short space of time.

Free-standing white boards can be positioned wherever required. They are only used to provide essential real-time travel information to keep customers informed of operational changes that may interrupt their travel plans.

The reverse of the unit may have the same information details as the front, different information or a TfL publicity poster. When not required, the free-standing white boards are to be removed from the flow of customers and the information wiped clean.

The white, vitreous enamel panel can be written on using appropriate pens, or a poster can be fixed to the top and bottom using built-in clips. Their ergonomic design and manoeuvrability enable them to be easily moved, and they will pass through standard height door frames. The design provides clear sight lines and litter or suspect packages cannot be concealed. All surfaces are resistant to wear and tear.

Tensator wall mounted barriers and barrier clips can be used to temporaraly control passenger movement and control acsess to restricted or hazerdous areas.



Front Elevation

Front Elevation –
with tensator barrier clips

Front Elevation –
Tensator wall mounted barrier cassette